YOUNG PEOPLE AND CAREERS

A COMPARATIVE STUDY OF SCHOOL CAREERS GUIDANCE IN SHANGHAI AND EDINBURGH

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I certify that this thesis has been composed by myself and is the result of my own work.

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ABSTRACT

This study involved 1068 pupils in seven selected secondary schools, 48 guidance teachers and careers officers in Shanghai and Edinburgh. It employed the research methods of questionnaire survey, unstructured interviews, and observation. The purpose of this study was to examine careers guidance through comparative studies in Shanghai and Edinburgh.

Points of comparison between the two cities include criteria for choosing a career, occupational preferences, people who influence pupils' choice of careers, variables that influence pupils' higher education and job expectations, and the changing process of pupils' occupational aims during their secondary school years. Results demonstrate that pupils' careers development is influenced by their personal psychological development (interests and abilities), by the culture of the school, by their school academic achievements, by their family, by the prevailing political, economic and cultural climate, by public opinion and by the labour market. None of the existing careers guidance models sufficiently encompasses all these important factors. Therefore, although some aspects of each of the careers guidance models appear to be relevant to the situation in Shanghai and Edinburgh, no one single model adequately informs careers guidance in either country. The survey also examined pupils' careers guidance needs and the main careers guidance methods. The results show that careers guidance is a high priority amongst pupils in Shanghai and Edinburgh.

It is hoped that this study might help schools in Shanghai and Edinburgh to improve upon existing careers guidance practice.

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INTRODUCTION

Introduction

Careers guidance is an increasingly important area of education in the rapidly changing world of work. In both China and Britain, careers guidance is regarded as a means to tap human resources more fully and to assist in the development of the individual.

Since 1909 a number of careers guidance models have been developed. Most of the main models have originated in the United States and have been adapted in many countries, including China and Britain, where they have had a strong influence. More recently, a few careers guidance models have been developed in China and Britain. However, insufficient studies have been carried out to examine whether these careers guidance models have been successfully applied in China and Britain.

The various careers guidance models cover different facets of the field. Although the debate on careers guidance models continues, many of them have an influence on practice. In Shanghai and Edinburgh a series of school careers guidance methods has been developed, but very limited research has been done to evaluate them.

The purpose of this study is to examine careers guidance through case studies exploring pupils' experience and perceptions of careers choices, and of school careers guidance methods in Shanghai and Edinburgh.

1. The background of this study

Before embarking on this study I must explain how it came about, and how it became the topic of my Ph.D.

I came to Edinburgh from Shanghai, in China, where, from 1986 to 1991, I had been a research fellow in Education at the Institute of Educational Sciences at the East China Normal University.

Prior to that, in 1983, I had been awarded a bachelor's degree in Education, and had gone on to do a Master's degree. At the beginning of the 1980s, a decision was taken by the Chinese Communist Party to shift the focus of its policy to what it termed socialist modernisation. This was to entail modernising agriculture, industry, national defence and science and technology. A series of reforms was carried out that affected the economy, employment and education, and gave young people and employers more and more freedom to choose each other. No such freedom had been known since 1949 (see Chapter 1). However, there was no scientific method to help young people and employers find each other. In 1984, as a first year Master student,[1] I happened to read a book entitled *Career Guidance and Counselling Through The Life Span: Systematic Approaches* (Herr and Cramer, 1979), in Beijing Library, which made me aware of terms such as careers education, careers guidance and careers counselling. This was the first time that I realised the scope of careers guidance, and just how urgently it was needed in China in order to help young people choose suitable careers.

In 1985 I surveyed 207 pupils from vocational and technical schools as part of my Master's research project. The results showed that 54.9 per cent of them found the requirements of their subjects incompatible with their interests and abilities, and that 39.6 per cent were dissatisfied with the relationship between subjects and future jobs. Only 51.5 per cent hoped to enter jobs that were related to the subjects they were studying (Zhang Weiyuan, 1986). It seemed to me that this situation had in part come about

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[1] My Master study was three years from September 1983 to July 1986 in the Institute of Educational Sciences at the East China Normal University.

because pupils had not had the chance of careers guidance. Pupils were needing careers guidance to help them choose their subjects and occupations. However, careers guidance, I later found out, had been abandoned in China since 1949.

As careers guidance had been developing in the United States for more than 80 years, I decided to study American careers guidance in the hope that I might one day adapt some of their methods for use in China. The topic of my Master's thesis was *Evaluating Theories and Models of Careers Guidance in U.S.A* and an article based on it was published in the journal of the East China Normal University (Zhang Weiyuan, 1987). At the same time I published a series of articles on American models and models of careers guidance in Chinese newspapers and journals, which brought them to the attention of many researchers and guidance teachers.

In 1986 I received my Master's degree in Education and was offered the post of assistant lecturer at the East China Normal University. At this time I was also awarded five months' training in careers education and careers guidance at the University of Victoria in Canada, funded by the International Development Research Centre (IDRC) in Canada. There I joined a co-operative research project on Comparative Pupils' Careers Needs in China and Canada. In 1988 I was invited to return to Victoria University to visit Careers Education and Careers Guidance in some schools and colleges. This was also funded by the IDRC. In Canada, several careers guidance methods had been developed, but methods were predominantly based on American careers guidance models.

1988 saw my promotion to research fellow at the East China Normal University, as well as the publication of my book, *School and Vocational Guidance,* by Tongji University Press (Zhang Weiyuan and Qu Bo, 1988). This book summarised my one and a half years' experience of careers

guidance experiments (February 1987 to July 1988) in Luwan District, Shanghai, with reference to American and Canadian careers guidance methods. This was the first book on careers guidance in China since 1949. 80,000 copies were sold and it was subsequently used by schools in Shanghai, Beijing, Tianjin, Hubei and Heilongjiang for the development of careers guidance programmes. Retrospectively, I can see that this book was very coloured by American and Canadian careers guidance methods.

2. Previous studies of careers guidance

In the development of careers guidance in China it is necessary to consult the 1986 Careers Need Survey, the results of which had been used as the basis for developing a school careers guidance programme. The book, *Careers Guidance in Secondary Schools (Textbook for Guidance Teachers)*, (Jin Yiming et al., 1991), which is currently the national textbook for training careers guidance providers, also used the results of the 1986 Careers Need Survey.

The 1986 survey was conducted by the Careers Guidance Research Group of the East China Normal University. This group consisted of Professor Jin Yiming (my previous supervisor), Huang Kexiao, Si Fumin and myself. The following will describe the main content of the 1986 survey.

Six regular secondary schools in Shanghai were selected to participate in the survey. In China there are two kinds of regular secondary school. The first, known as "full" school, includes junior and senior secondary school levels; the second is called "non-full" secondary school and has only junior secondary school level. Junior secondary school pupils study for three years (from 14 to 16), and then senior secondary school pupils for a further three (from 17 to 19). Among the six schools chosen for the survey, four were full

secondary schools, and two were non-full secondary schools. In each of the schools, classes were chosen at random from each grade. Table 1 shows the distribution and return of questionnaires.

Table 1. Questionnaires distributed and returned

	Number distributed	Number returned	Return (%)
Pupils	800	674	84.2

(Source: Jin Yiming et al.: *The Two-year Research Report on Careers Guidance (May 1985 to May 1987).* In Jin Yiming and Qian Jinfang, 1990).

There were four main topic areas in this survey: pupils' value criteria; pupils' occupational preferences; the people from whom pupils get help when choosing a career; and the kind of help that pupils want when choosing a career.

Value criteria

Based on information gathered from meetings and individual interviews in two other secondary schools before the survey, pupils in this survey were asked about careers needs, and six value criteria relating to occupational choices were devised.

The respondents were then asked to rank these six criteria from 1 (most important) to 6 (least important). Table 2 reveals the average ranking results from 674 pupils.

Table 2. Ranking of pupils' value criteria in careers choices

Value Criteria	Pupils' Ranking (N=674)
Use of abilities	1
Contribution to society	2
Interests	3
Job prestige/status	4
Salary	5
Working conditions	6

(Source: Jin Yiming et al.: *The Two-year Research Report on Careers Guidance (May 1985 to May 1987).* In Jin Yiming and Qian Jinfang, 1990).

Table 2 shows that pupils regarded the use of personal abilities as the most important factor when choosing a career, followed by the contribution of a job to society. They thought salary and working conditions were the least important factors.

Pupils' occupational preferences

Occupational categories, representing a broad spectrum of occupations included in the 1982 Chinese census, were used to examine pupils' occupational preferences.[2] Three hundred pupils' questionnaires were chosen at random from the total 674 questionnaires and pupils' preferred occupational choices were identified. Because the statistical analysis of these questionnaires was done without the help of a statistical package it was time-consuming. Among the respondents there were 150 males and 150 females (see Table 3).

[2]The category of the 1982 Chinese census was not used in the current study (see later in this chapter).

Table 3 . Pupils' first occupational choices (N = 300)

	a	b	c	d	e	f	g	h	i	j	Total
Total	160	33	30	42	14	16	4	0	1	0	300
%	53.3	11	10	14	4.7	5.3	1.3	0	0.3	0	99%
male	91	11	9	14	14	8	3	0	0	0	150
%	60.7	7.3	6	9.3	9.3	5	2	0	0	0	99.6%
female	69	22	21	28	0	8	1	0	0	1	150
%	46	15	14	19	0	5	0.7	0	0.7	0	100%

a. Scientist
b. Teacher
c. Athlete and artist
d. Doctor
e. Soldier
f. Clerk and manager
g. Businessman and service industry worker
h. Industrial worker
i. Agricultural worker
j. Self-employed

(Source: Jin Yiming et al.: *A Two-year Research Report on Careers Guidance (May 1985 to May 1987).* In Jin Yiming and Qian Jinfang, 1990).

In order to make Table 3 more readable, it has been redrawn also as Figure 1.

Figure 1. Pupils' first occupational choices (N=300)

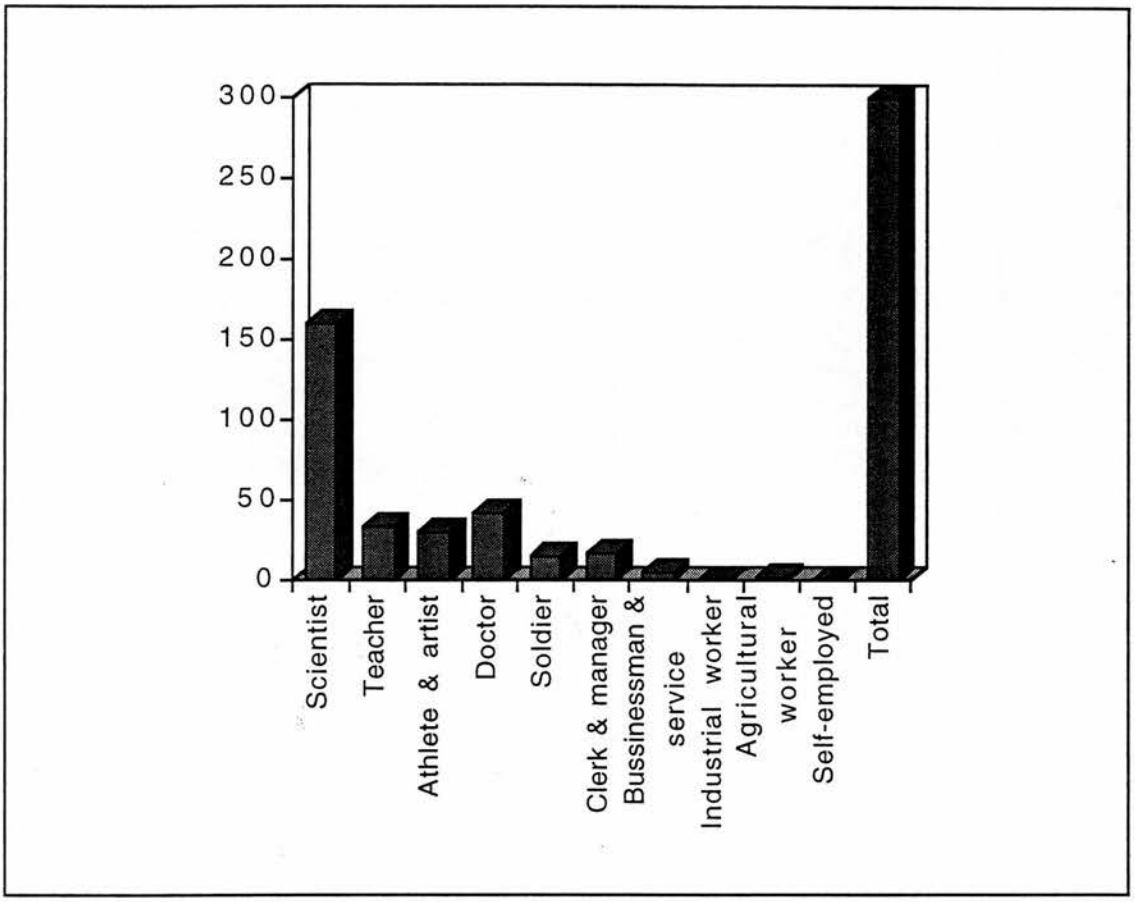

Figure 1 indicates that pupils were drawn to occupations that could be classified as requiring more advanced training. Many pupils wanted to be scientists (53.3 per cent), doctors (14 per cent) and teachers (11 per cent). Chapter 6 will explore pupils' occupational preferences under the new systems of economy and employment in 1994.

The people from whom pupils get help when choosing a career

Pupils were also asked who were reported to be most influential in their career choices. The results are presented in Table 4 below.

Table 4. People with most influence on pupils' career choices (N=674)

People	Percentage (%)
Teacher	18
Parent	60
Brother/sister	1
Classmate	3
Other	1
No idea	17

(Source: Jin Yiming et al.: *The Two-year Research Report on Careers Guidance (May 1985 to May 1987).* In Jin Yiming and Qian Jinfang, 1990).

The results show that parents, not teachers, were the major influence on pupils' career choices.

The kind of help wanted by pupils when choosing a career

The pupils were asked what kind of help they most wanted. Table 5 reveals their responses.

Table 5. The kind of help wanted by pupils (N=674)

Type of help	Percentage (%)
More information about occupations	51
More information about themselves	36
Others	3
No idea	10

(Source: Jin Yiming et al:. *The Two-year Research Report on Careers Guidance (May 1985 to May 1987).* In Jin Yiming and Qian Jinfang, 1990).

Table 5 shows that 87 per cent of pupils wanted more information on different occupations and on themselves as individuals, when choosing a career.

The following conclusions of this survey were made by the Careers Guidance Research Group:

(1) Pupils regarded ethical values as more important than material and economic values. "Benefit to society" was viewed as a very important value criteria for occupational choice (ranking 2). However, pupils wished to develop their personal talents (ranking 1) and interests (ranking 3) to the full as a means of making a contribution to their country, thus combining their personal abilities and interests with the needs of society (see Table 2).

(2) Pupils preferred to do intellectually stimulating work (e.g., scientist, doctor and teacher) rather than become, for example, a factory worker.

(3) High income from self-employment was not a great attraction to pupils.

(4) Parents were the fundamental source of help in pupils' careers choices.

(5) Careers guidance, especially gathering more careers information and gaining a better understanding of oneself, was a high priority amongst pupils.

However, it is necessary to consider whether the results of the 1986 survey are still relevant to the present day. Since 1986 many changes have taken place in China's labour market as well as in its education, employment and economic policies. There is no doubt that these changes have affected young people's careers needs and careers considerations, which means that the results of the 1986 survey may be out of date and cannot be the basis of current careers guidance practice.

There are several other shortcomings of the 1986 survey:

(1) With the increased freedom among employers and employees to choose each other, young people's personal qualifications and job opportunities have become more important. These were not mentioned among the value criteria for choosing a career in the 1986 survey.

(2) Some occupations were not classified logically in the 1986 survey. For example, Clerk and Manager were put in the same category, and so were Businessman and Service Industry Worker, whereas most managers and businessmen are more highly qualified than clerks and service industry workers.

(3) The 1986 survey was superficial. It did not explore how and why pupils' career aims change, nor the factors that influence pupils' careers choices.

The results of the 1986 survey are therefore unsuitable to be used as the basis of a careers guidance model.

In view of these shortcomings, I considered conducting a new survey to study pupils' careers needs, awareness and development. In 1991 I was awarded a Sino-British scholarship to study for a Ph.D. The first year of my Ph.D was spent studying careers guidance in China. After reviewing the literature I found that the main careers guidance models in Britain also came from the United States, although careers guidance in Britain had been operational for about 80 years. Insufficient research has been done on the different careers guidance models and methods in the context of secondary schools. In order to examine careers guidance models and methods, I felt that it would be very valuable to do a comparative study of secondary school pupils' experience and perception of careers choices and careers guidance methods in China and Britain, and more particularly in two parts of China and Britain - Shanghai and Edinburgh (see Chapter 3).

3. Arrangement of the dissertation

The dissertation is arranged as follows:

Introduction

The introduction describes careers guidance in China from 1985 to the present. This study shows that there was an urgent need to evaluate careers guidance in China, and that it was important also to assess careers guidance in Britain. The goal of this study was to examine careers guidance through comparative case studies in Shanghai and Edinburgh.

Chapter 1: The History and Development of Careers Guidance in China and Great Britain

This chapter describes and evaluates the history, development and current status of careers guidance in both China and Great Britain. The aim of this part is to try and learn from history, as well as to explore the relationship between careers guidance and local politics, education, and the economic and employment situation.

Chapter 2: Models of Careers Guidance

This chapter describes and analyses the different careers guidance models that have had a strong influence in China and Britain. The survey results are used to evaluate these models in Chapters 4, 5 and 6.

Chapter 3: The Design, Methodology and Materials of the Research

This chapter describes and explains the research methods used in this study, including questionnaire surveys, interviews, observation and statistical treatment.

Chapter 4: An Analysis of Pupils' Experience and Perception of Careers Choices in Shanghai

This chapter examines pupils' criteria for choosing a career, occupational preferences, the factors that influence higher education and job expectations, and the change in occupational aspirations over time and the reasons behind these in Shanghai.

Chapter 5: An Analysis of Pupils' Experience and Perception of Careers Choices in Edinburgh

This chapter examines pupils' criteria for choosing a career, occupational preferences, the factors that influence higher education and job expectations,

and the change in occupational aspirations over time and the reasons behind these in Edinburgh.

Chapter 6: A Comparative Analysis of Pupils' Experience and Perception of Careers Choices in Shanghai and Edinburgh

This chapter compares and analyses pupils' criteria for choosing a career, occupational preferences, the factors that influence higher education and job expectations, and the change in occupational aspirations over time and the reasons behind these in Shanghai and Edinburgh.

Chapter 7: An Analysis of Pupils' Experience and Perception of Careers Guidance Methods in Shanghai

This chapter assesses the methods of careers guidance using the results of the questionnaire survey, interviews and observations in Shanghai. It assesses the advantages and disadvantages of each method, including interest groups, competitions, careers days, careers talks, careers rooms, non-standardised psychological tests, careers counselling, T.V./films/novels and school curricula. It proposes improvements for each method in Shanghai.

Chapter 8: An Analysis of Pupils' Experience and Perception of Careers Guidance Methods in Edinburgh

This chapter assesses the methods of careers guidance using the results of the questionnaire survey, interviews and observations in Edinburgh. It assesses the advantages and disadvantages of each method, including careers days, work experience, careers visits, careers libraries, careers counselling, computer-assisted careers guidance, T.V./films/novels and school curricula. It proposes improvements for each method in Edinburgh.

Chapter 9: A Comparative Analysis of Pupils' Experience and Perception of Careers Guidance Methods in Shanghai and Edinburgh

This chapter compares and analyses the methods of careers guidance and proposes improvements in Shanghai and Edinburgh.

Chapter 10: Discussion

This chapter attempts to construct a comprehensive picture of pupils' careers development and considerations during their secondary school years. It also discusses the relationship between careers guidance models and practice, and between careers guidance policies and the implementation, as well as the implications of this study. Finally it points to the need for further research in the field of careers guidance.

CHAPTER 1

THE HISTORY AND DEVELOPMENT OF CAREERS GUIDANCE IN CHINA AND GREAT BRITAIN

Chapter 1: The History and Development of Careers Guidance in China and Great Britain

1. The history and development of careers guidance in China

The developing and changing process of careers guidance in China can be divided into six distinct stages: the rise of vocational guidance (1917-1949); the re-orientation of vocational guidance (1950-1965); the abandonment of vocational guidance (1966-1976); a transitional period in careers guidance (1977-1986); the experimental period of careers guidance (1987-1989); and finally the expansionist period of careers guidance (1990 to the present). This section describes the changing process of careers guidance and its current development in China.

(1) Stage 1: the rise of vocational guidance 1917-1949

Careers guidance was initially sponsored by the Chinese Vocational Educational Association (CVEA). The CVEA was set up by Huang Yanpei, a famous democratic educationist and a pioneer of vocational guidance and vocational education, in Shanghai in 1917. He was joined in this venture by Cai Yuanpei and others (CVEA, 1917a).

There were two main reasons why the CVEA appeared in 1917. First, in the 1910s, during the time of the First World War, the rapid expansion of capitalism in China saw the need for a large number of different kinds of skilled workers. However, school education only trained officials: "pupils were high in careers expectations and poor in practical vocational abilities" (CVEA, 1917a). The result was that the Chinese bourgeoisie had to engage foreign technicians and administrators, with high salaries. Huang Yanpei

said: "The reason why China's economy could not be vigorously developed was that China lacked skilled workers" (CVEA, 1918a). Huang Yanpei attacked existing education, which he regarded as useless and irrelevant. He advocated a more pragmatic approach to education, which prepared pupils for life and transformed people from "consumers" to "producers" (Bailey, 1990, p. 208).

Second, unemployment had been a serious problem at that time. The majority of graduates could not find jobs. According to a survey, three quarters of secondary school leavers in 1915 could not find jobs in Jiangsu province, because they had no vocational skills (CVEA, 1917a).

Therefore, employers could not find skilled workers and graduates could not find jobs. In order to highlight this problem, the Chinese Vocational Education Association stated in their regulations that the most important and difficult problem at present in China was career. The only way to solve this problem was to combine education with vocation (CVEA, 1917b).

In 1914 Huang Yanpei investigated 88 schools in 25 cities or counties in China and found that education had to be reformed to suit the changing industrial economy (Huang Yanpei, 1982, p. 68). In 1915 Huang Yanpei visited 52 schools in 25 cities in the United States. He felt that American-style vocational education and guidance could be an effective way to reform the Chinese education system and prevent further crises (Huang Yanpei, 1917).

On 6 May 1917 the Chinese Vocational Education Association (CVEA) was set up in Shanghai. The manifesto of this association called for an education system that would directly solve the "problem of livelihood". The aim of the CVEA was to help unemployed people get jobs and make employees happier at work (CVEA, 1917a). This aim was to be achieved through vocational guidance and vocational education. Vocational guidance was to

help people find suitable jobs, while vocational education was to train people to be competent for jobs. According to Huang Yanpei, if everybody could get work and enjoy their work, unhappiness and misery would disappear from the world (CVEA, 1917a).

The pioneers of the CVEA were well known. Huang Yanpei was a minister of education in Jiangsu province until 1914 and Cai Yuanpei was a minister in the Chinese Education Department. Such pioneers encouraged many government leaders and rich businessmen, even warlords, to join the CVEA. According to statistics there were 786 members in 1917, 1429 in 1918, and 9884 in 1931 (Jiang Henyuan, 1933).

In June 1918, the CVEA set up the China Vocational School in Shanghai in order to put their ideas into practice and attempt to set an example for other schools. The school used the method of "half day study and half day workshop". Pupils studied in classrooms in the morning and worked in factories in the afternoon (CVEA, 1918a).

From 1917 to 1948 the CVEA set up 5 vocational schools, 12 vocational education centres and 12 vocational guidance centres. The CVEA also established Vocational Guidance Committees and some job centres helping school leavers find jobs in larger cities such as Shanghai, Nanjing, Chongqing and Fuzhou. The CVEA published more than 200 books, and 30 survey reports on vocational education and guidance.[1] The library of the East China Normal University stocked some books on careers guidance, published by the CVEA. For example, *A Collection of Articles on Vocational Guidance* (Hou Luqing, 1946), edited by Hou Luqing, served as an introduction to the general principles of vocational guidance. *Collections of Articles on Vocational Guidance Experiments* (CVEA, 1936) included details

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[1] Personal interview with Jin Dajun, a director of the Shanghai Branch of CVEA, 20 April 1994.

of some studies of vocational guidance in primary schools in China. In the 1930s many primary school leavers went straight to look for jobs. *Vocational Guidance in Foreign Countries* (CVEA, 1927) described the methods of vocational guidance in the United States, Great Britain and Germany.

In July 1947 the CVEA set up a new school in Shanghai - Bile Secondary School. They developed a vocational guidance programme that focused on observation, psychological tests, interest groups (electricity, carpentry, chemistry, social services, literature and art), counselling and parents' meetings (CVEA, 1948). This research was stopped after the Bile Secondary School was taken over by the new Communist local government in 1949.

After the foundation of the People's Republic of China in 1949, the Chinese government engaged the principal leaders of the CVEA as government officials. Huang Yanpei was a vice premier of the Political Council. All schools founded by the CVEA were gradually taken over by the government. In 1954 all vocational guidance centres were closed due to lack of business. The CVEA headquarters moved to Beijing where it developed correspondence education programmes of vocational training.

The models of vocational guidance followed by the CVEA were strongly influenced by those of the United States and European countries. In the 70 volumes of the journal *Education and Vocation* (November 1917 to November 1925), 56 articles on vocational guidance concerned the United States, 17 Great Britain, 16 Germany, 14 Japan and France. As Huang Yanpei said: "Vocational education and vocational guidance were not created by the CVEA. They originated in European countries and were developed in the United States, and then exerted an influence on eastern countries" (Huang Yanpei, 1917).

There were three main ways in which American vocational education and guidance were transmitted to China. First, Huang Yanpei visited the United

States to learn about American vocational education and guidance. Second, some activists in the CVEA, such as Liu Chanen, Wang Zhixing and Zhong Daozhan, studied vocational education and guidance in the United States, and later worked for the CVEA. Third, the American educationist Professor John Dewey went to China to develop his theory of democratic society, vocational education and vocational guidance in 1919 (see Chapter 2). Thousands of leading educators in central China gathered to hear his opening address. Dewey's former Chinese students at Columbia University arranged his visiting professorship in China. From 1919 to 1922 Dewey, with the assistance of Huang Yanpei, promoted pragmatic education in Beijing and Shanghai (Huang Jiashu, 1987, p.34). Dewey advocated that education should help people find occupations that match their interests and abilities. Based on this model, Huang Yanpei proposed that the purpose of CVEA was to help unemployed people get jobs and make employees happier at work. Dewey stated that school education should train not only pupils' brains, but also their hands. Huang Yanpei adopted this idea in CVEA vocational schools.

In 1949 Mao Zedong officially denounced Dewey's theory as U S spiritual aggression towards China. Mao criticised Dewey's theory of the democratic society, as he saw Dewey as supporting Chiang Kai-shek's defeated Nationalists. Dewey lived to see the establishment of the People's Republic of China, and watched his closest followers become refugees to the United States or Taiwan (Keenan, 1977).

(2) Stage 2: the re-orientation of vocational education and vocational guidance 1950-1965

During the eight years after the founding of the People's Republic of China in 1949, the Chinese education system emulated that of the Soviet Union.

China lacked experience in socialist construction and had only the Soviet Communist Party for reference. Consequently, it was asserted in the guiding ideology for Chinese education that the Soviet education system should be used as an example. In Chinese ordinary secondary schools education was replaced by "polytechnic education" and vocational guidance was replaced by political and ideological education. Polytechnic education was proposed by Nadezhda Krupskaya in the Soviet Union. It was intended to make pupils in ordinary schools familiar with the most important branches of production in industry and agriculture, to impart skills in the handling of tools and materials, and generally to acquaint pupils with both theoretical knowledge and first-hand practical experience of the basic processes of production (Grant, 1964).

In 1955 the Chinese government sent a team of primary and secondary school teachers to the Soviet Union to study polytechnic education. On their return to China, these teachers were divided into small groups to tour 16 major Chinese cities, spread their message, and share their enthusiasm for progressive educational practice in the U.S.S.R (Chen, 1981, pp. 36 - 38).

Many systems and methods from the Soviet Union were then introduced into Chinese schools, such as extracurricular activities and class collectives. The Chinese government changed the name of the Children's Corps to Young Pioneers (YP), the title used in the Soviet Union. Designed for children from the age of nine to fifteen, the movement was based in the schools where teachers especially selected for youth work grounded them in "the five loves" - of motherland, people, labour, scientific knowledge and public property. Older children were recruited for the New Democratic Youth League, renamed the Communist Youth League (CYL) in 1953, whose membership range was 15 to 25 years. CYL activities were politically oriented, and membership was cohsidered a step towards joining the Communist Party (Cleverley, 1991. pp. 133 -134). Guidance teachers were

used in the liberated areas occupied by the Chinese Communist Party in the 1930s. In the 1950s Chinese schools gained experience of guidance teachers from the Soviet Union (Fan Tianpai, 1991). One of the main tasks for guidance teachers was to organise class collectives and extracurricular activities. Each class had a guidance teacher who was responsible for political and ideological education, discussing pupils' academic and social problems, organising class activities and encouraging pupils to take part in physical exercise for the benefit of their health. The guidance teacher had to organise a class collective, select class leaders, and work out class collective goals such as academic achievements and class discipline. Each pupil was a member of a class collective and was encouraged to make a contribution to it. Pupils were to study with each other, work with each other and help each other within their class collectives. The influential textbook, *Pedagogy*, edited by I. A. Kairov and others in 1956, was used to train teachers in China. This book had two long chapters on *"The Pupil Collective in the School"* and *"The Guidance Teacher"* (Kairov, et al., 1956).

At the same time a new kind of vocational technical school was imported from the Soviet Union - the skilled worker school. This kind of school enrolled pupils at the upper-secondary level and prepared middle-level skilled workers (Tsang, 1994).

In 1957 with the political split between China and Russia, Mao complained about those Chinese who adopted Soviet ideas mechanically (Cleverley, 1991). From 1958 polytechnic education was replaced by a course on labour education. This was because, in practice, polytechnic education could not deliver systematic scientific knowledge to pupils. From 1960 to 1965 the number of hours spent on labour education was decreased to allow more time for academic teaching hours in ordinary secondary schools in order to improve the quality of education (Zhòu Yuliang, 1990).

During the period from 1950 to 1965 the Communist Party of China and the People's Government tried to guarantee the rights of education and work for everybody. At the same time a centralised placement system came into being (Bian, 1994). Planning for the placement of urban school leavers and university graduates was worked out by the central authorities and directives were passed down to the lower levels. Under this placement system, guidance teachers in schools and universities were responsible for educating pupils to obey the government's arrangement unreservedly, to place their lives at the disposal of the Party and to take people's needs as their only aspiration.

(3) Stage 3: the abandonment of vocational guidance 1966-1976

During the Cultural Revolution from 1966 to 1976 all urban school leavers went without choice to the countryside to spend some time working in agriculture. Vocational guidance was not thought necessary. According to Mao Zedong's theory, in the 17 years since the founding of the People's Republic of China the leadership of the education departments had been seized by a handful of traitors, special agents and "capitalist roaders". The proletarian educational line had never been carried out. The education system and the principles and methods of teaching had remained virtually the same. The bourgeoisie reigned over the proletariat. The world outlook of the great majority of the original contingent of teachers was basically that of the bourgeoisie (Zhou Yuliang, 1990). Mao concluded that pupils and students had to be educated by poor and lower-middle-class peasants, because the majority of them had been trained by older intellectuals in schools, colleges and universities. Only in poor rural areas and through hard physical labour was there a way for youth to change their old ideology and outlook on the world.

From 1968 to 1976 the distinction in China between academic schools and vocational/technical schools was criticised as a device for perpetuating existing social inequalities (Pepper, 1990). All vocational schools and skilled worker schools were, therefore, axed or ceased operation. Only ordinary secondary schools were open to pupils. Universities and colleges were closed and entrance examinations were abolished. Graduates from urban secondary schools followed Mao's appeal to go up to the hills and down to the villages where they could "settle down and found their families" (Zhou Yuliang, 1990).

Huang Yanpei passed away just before the Cultural Revolution in 1966. During the Cultural Revolution the CVEA was forced to close, and all files were labelled "enemy files". Most of its researchers were sent to farms to do manual work and to receive political re-education and renew their world outlook. Huang Yanpei's wife, Yao Weijun, was tortured to death because her husband had set up the CVEA (Huang Jiashu, 1987). It was impossible for anyone to propose or introduce any other models or methods of careers guidance during the Cultural Revolution.

During the decade of turmoil in the Cultural Revolution, all secondary school leavers had to work in the countryside and mountain areas. Careers education and careers guidance were abandoned. Throughout China the quality of education dropped drastically and secondary education had no variety in its structure.

(4) Stage 4: a transitional period in careers guidance 1977-1986

The overthrow of the "Gang of Four"[2] in 1976 marked the end of the Cultural Revolution. The Chinese government began to deal with problems caused by the Cultural Revolution and to bring order out of chaos. In educational matters, entrance examinations were restored and universities recruited pupils in 1977. Mandatory rural work ceased.

In December 1978 the Third Plenary Session of the Eleventh Central Committee of the Chinese Communist party was held. The meeting decided to shift the focus of the work of the whole party to "socialist modernisation" as from 1979. This was to include the modernisation of agriculture, industry, national defence and science and technology.

Since the early 1980s a series of important reforms have been carried out in the fields of economy and education. Some of these policies and measures have had a direct influence on people's awareness and vocational choices.

Reform of the job assignment system

From 1953 to 1978, jobs were allocated according to the system of "unified labour allocation". It was colloquially called an "arranged marriage". The method of "unified labour allocation" was operated by the labour bureaux which allocated jobs to everyone. They also granted all employees in the state sector (and even in the collective sector) lifelong employment with promotion by seniority. This was known as the "iron rice-bowl" system in China. It meant that people who were recruited by the state sector were guaranteed a lifelong job and all benefits such as pension, free medical service, cheap housing, etc. Even employees' children could take on their

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[2] Four major leaders of the Cultural Revolution - Jiang Qing, Mao Zedong's wife, and her three senior associates, the propaganda chief, Zhang Chunqiao, the cultural administrator, Yao Wenyuan, and the youthful Vice-Chairman of the Central Committee of the Chinese Communist Party, Wang Hongwen.

parents' jobs after their parents had retired. These jobs could never be lost, just as an iron rice-bowl could never be broken. However, this system was eventually judged to be detrimental to workers' zeal and incompatible with any degree of job selectivity or mobility (State General Bureau of Labour of China, 24 March 1979).

From 1979 some state enterprises began to change the system of unified labour allocation by labour bureaux at all levels and started to experiment with a contract system, known colloquially as "freedom of marriage and divorce" (Feuchtwang, 1987). Employees had the freedom to choose their jobs, and employers had the right to select their staff and to fire unqualified workers if necessary. In 1986 the State Council of China decided to extend this system gradually to all Chinese state enterprises (State Council of China, 16 July 1986). By 1987, 9,270 (i.e. 75 per cent) of China's 12,398 large, state-owned industrial enterprises had introduced the contract system. The remaining enterprises were making active preparations to institute the system by the end of that year (Zhang Zeyu, 1987).

This method was effective in breaking down the formerly overcentralised management system. It took account of the preferences of employees and employers, improved their work motivation, and took account of the requirements of enterprises. Employers had the power to recruit workers who met job requirements.

The partial freeing up of the employment system was a necessary precondition for permitting careers choice in schools. Careers guidance would not have happened without this change in the job assignment system.

Reform of the employment system

The Central Committee of the Chinese Communist Party called a National Conference on Employment in 1980. At the conference, experiences in employment over the previous 31 years were summed up and a new policy was proposed. The old method of the State finding jobs for all its eligible urban workers was discarded. Instead, under the overall planning and guidance of the State, employment by assignment through governmental labour departments was to be integrated with voluntarily-organised employment agencies and self-employment policies (Yu Guangyuan, 1984).

China began to adopt a new, three-pronged policy of job-finding after 1980. The first option was that the government would find positions for the unemployed based on recommendations from area labour bureaux. Secondly, unemployed people could opt to form small groups or collectives and start up their own businesses. Thirdly, people could operate on an individual basis, setting up in business and enterprises, such as repair work, service industries, arts and handicrafts, the retail trade, catering and other trades. This multi-faceted employment policy was implemented because of the structural reform of the economy. At this time, therefore, there were three distinct areas of the economy: the state, the collective and the individual.

Under this policy some secondary school graduates took part in voluntarily-organised collective businesses or were self-employed. Unfortunately, the secondary school curricula after the Maoist reforms only served to prepare pupils for further academic study. Pupils were therefore poorly equipped for careers. It was very difficult for these young people to transfer from academic study to the world of work without support.

The reform of education

With the economic reforms after 1978, the weaknesses of the unitary system of secondary education became more and more apparent. Economic reform in China, by and large, leaned towards decentralising management to give local authorities and enterprises more power and freedom in administration and decision-making. The emerging labour assignment system provided an opportunity for both enterprises and graduates to choose each other. Enterprises needed to recruit a great number of new, skilled and qualified workers. Secondary school graduates wanted to find suitable jobs, in which they could express their vocational interests, abilities and values. However, the existing education system could not meet these requirements. Its failure to do so was the reason for a subsequent restructuring of the education system.

On 20 September 1980 the Ministry of Education and the State General Bureau of Labour called a joint conference. The conference agreed that the unitary system of secondary education did not suit the new requirements of the economic system. Chinese enterprises needed several millions of secondary school graduates who had vocational knowledge and skills. It was agreed that the structure of secondary education had to be reformed and vocational and technical education had to be developed quickly (Ministry of Education of China and State General Bureau of Labour of China, 7 October 1980).

In May 1985 the Central Committee of the Chinese Communist Party held a national education conference and a decision was made on 27 May to reform the education system (Central Committee of the Chinese Communist Party, 27 May 1985). This decision was crucial for educational reform in the next decade.

The conference policy document proposed a target of compulsory education for nine years, from primary school beginning at the age of 7 to the end of junior secondary school at the age of 16. In cities, in economically developed areas in the coastal provinces and some parts of the interior (covering one quarter of the country's population), universal attendance in a nine-year school system was already being achieved by 1984. Most importantly, the conference proposed the restructuring of secondary education and, once more, the promotion of vocational and technical education.

One major feature of the reform was the direction of pupils into different kinds of school after junior secondary school (at the age of 16+). On completing the compulsory nine years of education, pupils could take the entrance examination that directed them into different kinds of senior secondary education. One group of junior secondary school graduates would enter ordinary senior secondary schools and the others would receive vocational and technical education in one of the three types of school: specialised secondary school, skilled worker school and vocational school. It was hoped to increase enrolment in vocational and technical schools so that by 1990 enrolment in vocational and technical schools in most places would equal that of ordinary senior secondary schools. This meant that 50 per cent of the graduates from regular junior secondary schools would enter vocational and technical schools while the other 50 per cent would enter ordinary senior secondary schools by 1990 (Central Committee of the Chinese Communist Party, 27 May 1985).

To achieve this goal, the existing vocational and technical schools that had been resumed or set up after 1978 were to increase their enrolment of new pupils, and a number of ordinary senior secondary schools were to be systematically transformed into vocational schools or had to institute vocational classes.

By 1985 the vocationalising effort had made a significant mark in the history of Chinese education, not only because of its scale and complexities, but also because it reflected fundamental changes in the ruling Chinese Communist Party's perspective on education and national development (Tsang, 1994).

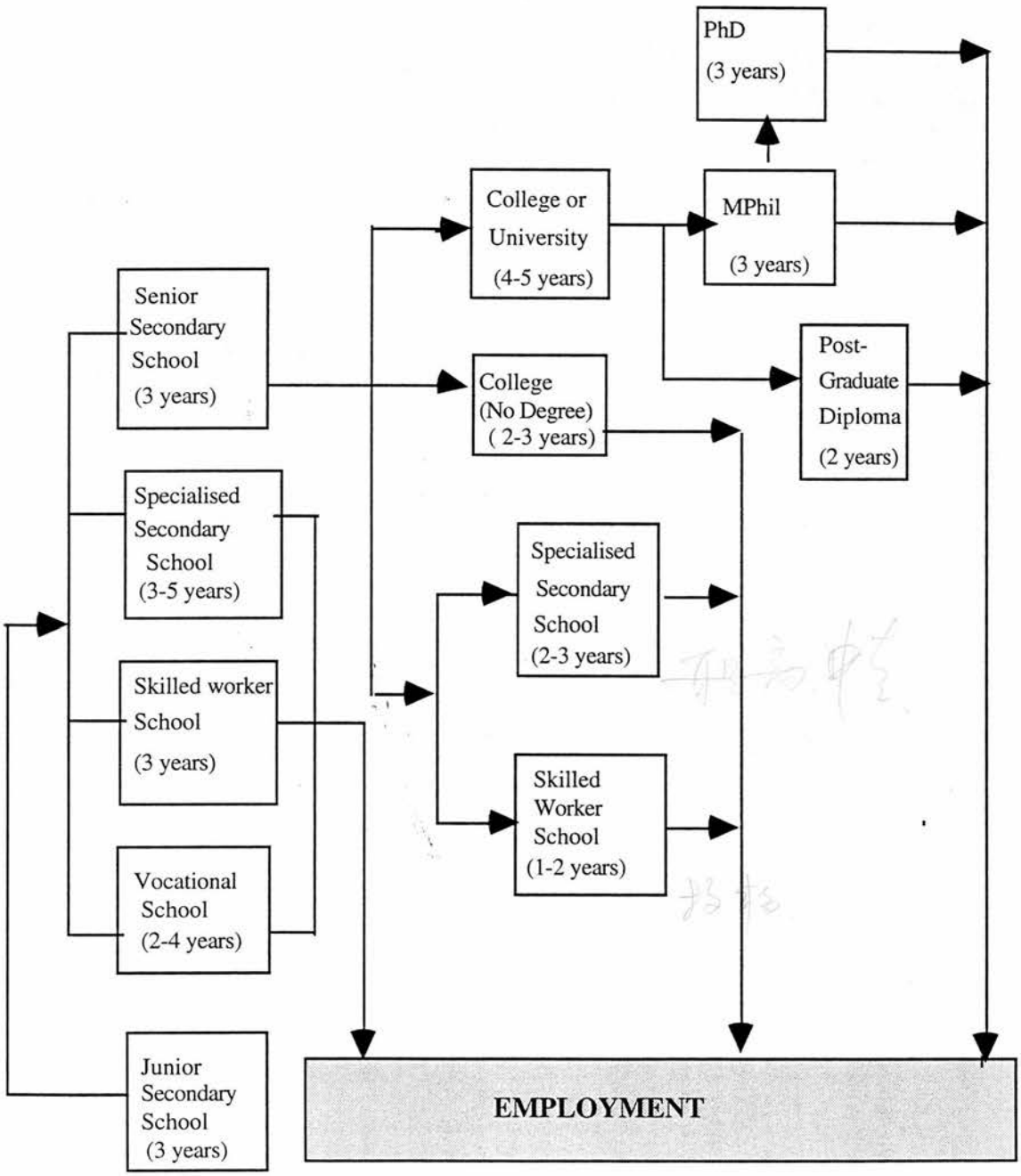
Under this reform, graduates from junior secondary schools in cities had to proceed to different types of further education and study specific subjects. 50 per cent of junior secondary school graduates had, therefore, to make preliminary decisions about their careers prior to entering vocational and technical schools. Once pupils entered vocational and technical schools they had to study specialised subjects, and on graduation they would enter more specialised fields of employment. In practice, then, they had very little chance to change their subjects. In this sense subject choices were irreversible, because changing school or subject became very difficult, if not impossible. Thus, a career choice by pupils at this stage was very crucial for their future life.

The systems of secondary education after 1980

The structure of the primary and secondary education system after 1980 followed a 6 + 3 + 3 pattern. Children normally entered primary school at the age of seven and would study for six years after completing three years in a kindergarten. If they did not repeat a grade they could expect to enter the junior secondary school to study for three years at the age of thirteen, and senior secondary or secondary vocational and technical schools at the age of sixteen for a further three years (Lewin and Little, 1994).

The post-1980 secondary education system included two broad kinds of secondary school: ordinary secondary schools, and vocational and technical schools. This system in urban areas can be summarised in Figure 1.1.

Figure 1.1. Post-secondary education system in urban areas in China



Ordinary secondary schools

Ordinary secondary schools could be divided into two stages: three years of junior secondary school and three years of senior secondary school.

According to the Constitution of the People's Republic of China in 1983, the aim of socialist education was to cultivate in pupils and all young people an all-round moral, intellectual and physical development (Encyclopaedia Editorial Committee, 1985). In conjunction with this principle, the task of an ordinary secondary school was to train socialist-conscious and cultured workers, namely, qualified pupils for careers training and qualified pupils for institutions of higher learning.

The purpose of secondary school education was to develop in pupils a desire to work for the people and for the modernisation of the country; to give pupils elementary knowledge of science and technology and culture; to prepare them both physically and mentally for life; and to enable them to acquire aesthetic judgement and basic labour skills, such as using tools, sewing machines, etc. (Encyclopaedia Editorial Committee, 1985).

Under the new systems of economy and employment, school leavers have to choose their further education and vocational training by themselves. They need careers guidance to help them in the transition from school to the world of work. However, the purpose of secondary school education has not changed to meet the new economic and employment systems and pupils' careers needs in the 1990s.

Secondary vocational and technical education

We have already said that there are three types of secondary vocational and technical schools at upper-secondary level: *specialised secondary schools* which consist of teacher training schools (run by educational bureaux), and secondary technical schools (run by non-educational, i.e. industrial, labour

ministries, departments and enterprises). There are also *skilled worker schools* run by the Ministry of Labour and its local bureaux, and *vocational schools* run by the education bureaux (Tsang, 1994).

Specialised secondary schools

Specialised secondary schools consist of secondary technical schools and teacher training schools. They mainly enrol graduates from junior secondary schools. Most pupils study for three or four years, some for as long as five years, and the curricula are quite specialised. The period can even be two to three years if an enrolee is already a senior secondary school graduate.

The task of teacher training schools is to produce teachers for local kindergartens and primary schools. The task of secondary technical schools is to produce middle-level professional personnel (technicians) with basic theoretical knowledge and extended practical skills, who are capable of teaching techniques and serving as the operating management in the forefront of various trades.

Secondary technical school graduates used to be assigned jobs by the state, mainly to state-owned enterprises. However, this ceased to be the case as economic reforms had resulted in a great number of collectively-owned and private enterprises. To solve this problem, secondary technical schools have been experimenting with a policy of not guaranteeing the employment of graduates since 1986 (State Education Commission of China, 1989).

Skilled worker schools

Skilled worker schools are run by many different groups. The majority are run by industrial departments, by labour and personnel departments, by factories and mines, and by some institutions and departments. Some are run jointly by units or enterprises with collective ownership.

This kind of school enrols mainly junior secondary school graduates, who study for three years. Senior secondary school graduates are accepted on some courses, for one or two years.

The task of skilled worker schools is to train middle-grade technical workers. In addition, they fulfil various training tasks according to needs and potential, including training in-service workers, military personnel transferred to civilian work and young people waiting for employment.

From 1949 to 1976 all skilled worker schools were run by the state. All graduates were assigned to work in state-owned units. This system was not, however, consistent with the reforms of the economic system. In the Reform of the Education System in 1985 by the Central Committee of the Chinese Communist Party it was pointed out that "in order to develop vocational education, it is imperative to bring into full play the enthusiasm of institutions, enterprises, departments, collectives, individuals and other social forces, which should be encouraged to run skilled worker schools" (State Education Commission of China, 1988). At the same time it was felt that the state should no longer have to be responsible for finding jobs for all graduates.

The reforms of 1986 changed the systems of graduate employment. Graduates were to be recommended by their schools and chosen by the enterprises for employment under the guidance of the state plan. Similarly, graduates were to be given freedom to choose their jobs.

Vocational schools

Vocational schools, which were disbanded during the Cultural Revolution, were reinstated from 1978. Vocational schools enrol graduates from junior secondary schools, usually for two or three years, but in some subjects for four years.

Vocational schools are concerned mainly with vocational and technical education, but they also provided cultural courses at senior secondary school level. Vocational schools produce labourers with theoretical as well as practical skills.

Graduates receive a certificate after passing a cultural and technical assessment. The state did not assign jobs to graduates. The graduates of vocational schools had to be recommended by the labour institutions (or labour service companies) and assessed by the organisation that wanted to employ them. Graduates could also choose their own professions.

Differences between the three kinds of secondary vocational and technical schools

Secondary vocational and technical schools are the cornerstone of vocational and technical education. Although specialised secondary schools, skilled worker schools and vocational schools all belong to the category of secondary vocational and technical education, there are some differences between them.

Firstly, specialised secondary schools and skilled worker schools were set up in the 1950s. These two types of school originally followed the Soviet Union's example in order to serve the highly-planned economic model. Most of the vocational schools were set up at the beginning of the 1980s to serve the new diversity of the economic model.

Secondly, specialised secondary schools mainly train pupils to be technicians, administrative personnel and teachers of kindergarten and primary schools. Skilled worker schools mainly train pupils to be technical workers, whose level of knowledge is lower than that of technicians. The task of vocational schools is more flexible: they train administrative personnel, technical workers, and people to work in the service industry.

Thirdly, many specialised secondary schools and skilled worker schools are still run by the state, while vocational schools are run by the locality.

Lastly, despite the nomenclature, the degree of specialisation offered by vocational schools is greater than that offered by specialised secondary schools and skilled worker schools. Specialised secondary schools and skilled worker schools provide training mainly in the field of heavy and light industry, and teacher training. Vocational schools offer training not only in industry but also in agriculture and business services.

These three kinds of secondary vocational and technical schools coexist at one time. However, because different schools appeared at different times and originally were designed to serve different economic models, there are problems of adapting different schools to serve the new economic system. What should the specific task of each kind of school be? What special subjects should each school offer in the new and changing situation? The personnel demanded by the new economic and social developments might be different from in the past. How secondary vocational and technical education adapted to this demand was an important research topic which needed to be studied.

Over the ten year period of the Cultural Revolution there was a missing generation of workers with technical and vocational training (Lewin and Little, 1994b). This meant there was insufficient skilled labour for economic recovery. In the 1980s the Chinese Communist Party decided to develop vocational and technical education as its main education reform. This shift was in favour of meeting the needs of economic reconstruction and human resource development rather than political development. According to statistics, there were no vocational schools and skilled worker schools in 1979, whereas by 1986 there were 8187 vocational schools and 3765 skilled worker schools (Lewin and Little, 1994b).

The reform of enrolment measures for school leavers

From 1949 to 1976 guidance teachers only educated pupils to meet the government's demands and pupils had no right to choose their own careers. In 1984 the enrolment method was changed to emphasise society's needs and personal preferences as well. Although methods of enrolment varied a little from city to city, they were basically the same.

In China, all secondary school graduates who applied for vocational and technical schools or higher education should firstly comply with certain political requirements: they should support the Chinese Communist Party, love the motherland, abide by government law and love labour. As regards political requirements, school guidance teachers were obliged to give an evaluative comment on each pupil (Zhou Yuliang, 1990). In practice, few pupils failed to meet these requirements.

After that, all secondary school graduates had to undergo a medical examination at a central hospital and they were given a booklet listing the physiological requirements of different subjects. For example, a pupil who was colour blind could not apply for subjects like cooking, nursing and weaving.

Pupils who met the application requirements had to apply for the entrance examination at the secondary school from which they had graduated. An examination card would be issued to the candidate. Each junior secondary school graduate could then select post-secondary schools and subjects. Junior secondary school pupils in Shanghai could choose one key senior secondary school, one regular senior secondary school, and 16 vocational and technical schools (2 subjects from each vocational and technical school). Their choices had to be listed in order of preference. The range available to them typically included about 10 senior secondary schools, 150 vocational and technical schools and 300 subjects. The subjects in vocational and technical schools

based on specific occupations in the local labour market. More vocational and technical schools were available because junior secondary school graduates could only choose senior secondary schools in their area, but they could choose vocational and technical schools in other areas of the same city, or even some vocational and technical schools in other cities. Next, pupils had to give a clear indication as to whether they would consider entering other senior secondary schools or vocational and technical schools if the schools they had chosen did not recruit them. This was called "choice solicitation" (Zhang Weiyuan and Qu Bo, 1988).

After 1984 the entrance examination for senior secondary schools and vocational and technical schools (which had been run by local areas from 1977 to 1984) was replaced by the Municipality Examination Commission of the Municipality Education Bureau. The examination for recruitment of new workers was arranged by the Education Sector of the Municipality Labour Bureau. The senior secondary entrance examination was held once a year. The exam questions were prepared by the municipality, and the examination papers graded by municipality.

After meeting the prerequisites of political evaluation and physical examination, pupils were arranged according to their choices. The admissions officers would then give pupils' applications to the appropriate vocational and technical schools, which then selected pupils in accordance with their political evaluation, physical condition, performance in the entrance examination, and their own choices.

The new method of enrolment gave pupils some freedom to choose the schools and subjects which were appropriate for them. The vocational and technical schools had the power and responsibility to select qualified pupils. This was the first time that pupils had been allowed to consider personal needs since 1949. This large shift in educational reform was of benefit to

pupils, schools and society. Pupils had some freedom to choose subjects and occupations which matched their interests, abilities and values. The vocational and technical schools also had some freedom to choose qualified new pupils who met the requirements of their courses. If young people could find suitable jobs and enterprises could recruit qualified workers, both sides could make a greater contribution to society's economic development.

The demand for careers guidance in urban secondary schools

Although pupils had more freedom to choose their subjects, most of the teachers, parents and pupils found it very difficult to make this crucial choice. Once pupils chose a subject to study they would work in this field and, as we have said, they had little chance to change subjects. From 1949 to 1986 there had been no proper careers guidance in secondary schools in China. Most Chinese did not even know the term "careers guidance". Therefore teachers could not give pupils proper help when pupils gained the freedom to choose their subjects. They gave pupils some suggestions for careers but based only on minimal personal experience and limited information.

Careers choice was a complex operation. The subjects in vocational and technical schools in developing countries were much narrower and more specialised than in developed countries (World Bank Economy Investigation Group, 1984). In China there were 335 subjects in secondary specialised schools, and 386 subjects in vocational schools in 1986 (Zhang Weiyuan and Qu Bo, 1988). These subjects in the 1980s were very different from those in the 1950s. In the 1950s most subjects were in the field of heavy industry, while in the 1980s most subjects were in the field of light industry and the service industries. Therefore, it was impossible for ordinary teachers, pupils and parents to obtain the necessary vocational information when there was no careers guidance system.

To some extent pupils chose their schools and subjects blindly and accidentally. As a result, many vocational and technical school pupils regretted their choices of school and subject, because they ended up with vocational and technical training in which they had little interest. Some pupils could not even qualify in their field because they lacked the ability which a specific field required.

As already mentioned a survey of careers was conducted by the present author in 1985 (Zhang Weiyuan, 1986). Two hundred and seven pupils were selected randomly from a sample of three vocational and technical schools in Shanghai. When choosing their subjects 85.5 per cent of the pupils had not been clear about what their subjects demanded; 54.9 per cent of them found that the requirements of their subjects were, in fact, incompatible with their interests and abilities; 39.6 per cent were dissatisfied with their subjects and their possible future work. 51.5 per cent hoped that their future jobs would relate to the subjects they were studying. The government had invested heavily in occupational training and the pupils had spent a great deal of time studying their subjects. It looked as if it would be a waste of finance and manpower if pupils were not interested in or qualified for their chosen work.

At the same time, many of the vocational and technical schools found it hard to enrol enough qualified pupils. Inevitably, some subject areas were more popular than others. In Shanghai, for example, according to an interview with Zhang Yushu, Director of the Luwan Admission Committee in Shanghai in 1986, the group of subjects concerned with "work with people" contained attractive areas, such as hotel and travel, etc., which most pupils wanted to pursue. In 1986, 68.5 per cent of the junior secondary school graduates in Luwan district selected "hotel or travel" as their first choice on their School and Subject Choice Application Forms. But only 1.5 per cent of them were given a place in Luwan district. A few good pupils

who got high marks in the entrance examination chose only "hotel and travel" and no other subjects. They were eliminated at interview because the schools thought that these pupils were not suitable for the job. Thus it proved difficult in practice to match pupils with subjects or fill "unpopular" courses.

There were some obvious reasons why this situation developed. Firstly, with the open-door policy to foreign countries, some joint-venture hotels were established in 1986. China was a low income and low living expense country, compared with developed countries. Because these hotels served mainly foreign tourists, hotel workers received a much higher salary than people who worked in the state or collective sector. Hence there was a high level of interest in hotel work.

Twenty-six new pupils majoring in Hotel Service in the Shanghai Hotel Service School were interviewed by the present author in 1987. All of them knew that their future salary would be much higher than that of a university professor. One pupil said that his first month's salary would be more than that of his principal and his guidance teacher put together. They knew that they would have pleasant working environments and good working conditions. Twenty-four of them did not consider what they would do in their work. They did not know that they would stand for six hours each day welcoming customers, or clean bedrooms, bathrooms and toilets, or serve meals. They did not know that they would have to work very hard, keep smiling, be helpful and friendly. In their interviews, 18 of them regretted their subject choices because all of them had got very high marks in the entrance examination but had lost their chance to enter university.

The group of subjects concerned with "work with machines" appeared to contain the most unattractive subjects. For example, 82 per cent of the new pupils in Luwan district in Shanghai in 1987 majoring in Electronics,

Machine Tools, Public Transport, Machine Repair and Weaving were recruited by "solicitation": namely, these pupils did not select their subjects but instead were "invited" to enrol.

A more serious problem was that some vocational and technical schools and subjects could not enrol enough new pupils. For example, the Weaving School closed because of a shortage of new pupils in 1987. The subject of Nursing at Luwan First Nursing School was cancelled because there were too few applicants. The result was a serious shortage of weaving workers and nurses in Shanghai. More severely, in 1987, eight per cent of junior secondary school pupils were not able to enter any post-secondary schools, because they refused to enter the schools and subjects which did not interest them.

This situation occurred because subject choices were made without accurate knowledge of the pupils' interests and abilities, and without the pupils knowing clearly about their schools and subjects, or the requirements of different occupations and society's needs.

(5) Stage 5: the experimental period of careers guidance 1987-1989

A series of articles by Jin Hanfen et al., which introduced careers guidance in foreign countries, was published in the journal *Foreign Education Information* in 1980 (Jin Hanfen et. al., 1980). This was a valuable contribution to information available in China but it did not evoke any reaction among readers. In 1984 an article, *Suggestions for Careers Guidance for Secondary School Pupils,* was written by the present author and published in the *Guangming Daily,* one of China's national newspapers (Zhang Weiyuan, 1984). Following that, the CVEA, which had resumed in 1980, began a column featuring careers guidance in its journal, *Education*

and Vocation, and the present author was engaged as a special writer. The journal then published a series of articles on careers guidance models in western countries. In this way those involved in research on education in China began to learn the names of some internationally well-known authorities, such as D. Super, J. Holland, F. Parsons, etc. In 1985, as mentioned in the introduction, the Institute of Educational Sciences of East China Normal University in Shanghai planned research on secondary school careers guidance with the help of the University of Victoria in Canada with funding from the International Development Research Centre. A survey on Secondary School Pupils' Careers Needs was conducted by Jin Yiming and others in the University in 1986, and showed that careers guidance was very necessary in urban secondary schools (see introduction).

In July 1987 the first National Conference on Careers Guidance was held in Shanghai, sponsored by the State Education Commission of China. As a result, some secondary schools in Luwan district of Shanghai, in Dongchen district of Beijing, and in Hainan Secondary School in Shanghai were selected as experimental schools in which to develop a careers guidance system with the guidance of the Institute of Educational Sciences at the East China Normal University.

In 1989 the State Education Commission of China promulgated a document which asked urban secondary schools to learn from its Luwan careers guidance experience and develop careers guidance provision (State Education Commission of China, 20 February 1989a). The purposes of careers guidance in Luwan were to help pupils to learn about the world of work, to get to know themselves, to develop self-expression, and to work out careers aims. Careers guidance was conducted through careers guidance activities, including interest groups, competitions, careers talks, careers days, careers rooms, psychological tests and careers counselling. Guidance teachers helped to organise these activities (Zhang Weiyuan, 1993a; 1993b).

After that, some secondary schools introduced careers guidance based on the Luwan model.

(6) Stage 6: the expansionist period of careers guidance 1990 to the present

In October 1990 the Second National Conference on Careers Guidance was held in Shanghai, sponsored by the State Education Commission of China, the CVEA and the Shanghai Education Bureau (SEB). About 125 representatives from 25 provinces and cities in China attended the meeting and more than 100 papers were submitted.

Between 1990 and 1991 the State Education Commission of China commissioned some careers guidance researchers and practitioners to edit a number of careers guidance books. Four books have now been published by Zhejiang Educational Press, including *Careers Guidance in Secondary Schools (textbook for pupils),* edited by Wen Youxing et al. (1990); *Careers Guidance in Secondary Schools (Textbook for guidance teachers),* edited by Jin Yiming et al. (1991); *An Introduction and Classification of Occupations,* edited by Zhang Sugui, Jian Huaizhi, Zhang Weiyuan and Shao Eiling (1991); *Careers Guidance in Foreign Countries,* edited by Shen Zhenhang, et al. (1991).

The spread of careers guidance continues in larger cities throughout the country. In 1992 the Shanghai Education Bureau commissioned some careers guidance researchers and practitioners to write a set of careers guidance textbooks which were used in Shanghai secondary schools. Since September 1993 a course on Careers Guidance has been required in all secondary schools in Shanghai. In Beijing all the secondary schools in Dongcheng district and some secondary schools in other districts have set up

careers guidance courses. In Guangdong, textbooks on careers guidance have been published by the Guangzhou Educational College and have been used in some secondary schools in Guangdong. A research group on careers guidance has been organised in Guangdong Educational College under the support of the State Education Commission of China. In the provinces of Hubei, Jiangsu, Shanxi, Liaoning, Heilongjiang and in Tianjin city many secondary schools have set up careers guidance courses.

On 29 September 1993 the Chinese Careers Guidance Association (CCGA), a member of the National Vocational and Technical Education Association which was supported by the Vocational and Technical Department of the State Education Commission, was set up in Beijing. This is the first national and professional careers guidance association in China. The aims of the CCGA are to implement socialist educational policies, to help people choose and get suitable jobs, to help employees feel happier at work and allow them to express their abilities, to help employers recruit qualified workers, and to make everyone contribute to Chinese society. The objectives of the CCGA are to promote communication between persons and organisations in careers guidance, to carry out careers guidance research, to develop careers guidance practice, to train careers guidance providers, to learn advanced careers guidance experience from foreign countries, and to strengthen international exchange and co-operation (Chinese Careers Guidance Association, 1994).

The CCGA has 83 regional organisations and 133 members. Professor Jin Yiming is the president. The committee of counsellors comprises Wen Youxin, secretary-general of the Chinese Vocational and Technical Education Association, Wan Wenzhan, director of the General Education Section of the State Education Commission of China, Zhang Xiaojian, director of the Employment Section of the China Labour Department, Shen Yunren, an academic member of the Central Institute of Educational

Sciences, Lan Hongsheng, vice director of the Beijing Education Bureau, and Yu Dali, vice director of the People's Government in Dongcheng district of Beijing. The CCGA secretariat is set up in the Careers Guidance Office of the Educational Research Centre in Dongcheng district of Beijing.

An organisation such as the Chinese Careers Guidance Association is much needed. Although the CVEA organisers are famous in the history of Chinese education, over 90 per cent of them are over 60 years old. Their main task is to edit the CVEA historical materials. The CVEA could not manage to support national careers guidance. However, the CCGA is not finding it easy to develop. The association has limited funding, not even enough to publish a newsletter.

(7) Summary

Since the 1980s a great change has been taking place in China with the reform of the economy and education. Although people's occupational choices are still limited by their knowledge, abilities, academic achievements, geographical locality (city, rural area, town) and society's needs, people, particularly in cities, have greater freedom to choose their careers than before. Employers have a right to recruit qualified workers and dismiss unqualified workers. In this situation, more and more people in China need careers guidance in order to make more informed choices.

Since 1986 an increasing number of people have paid attention to school level careers guidance. Some research has been done and some school careers guidance programmes have been developed in many secondary schools. Since 1993 in Shanghai all secondary schools have been required to implement careers guidance. However, research into careers guidance and current practice is just beginning. In order to develop a careers guidance

model and model for China, it is necessary to evaluate existing careers guidance and to understand pupils' careers development and needs.

As described in the introduction, this study is intended to examine careers guidance in China and Britain. This section has examined the process of careers guidance in China. The next section will explore the development of careers guidance in Great Britain.

2. The history and development of careers guidance in Great Britain

Careers guidance in China is still in its infancy, while careers guidance in Great Britain has been operational for 78 years. The developing and changing process of careers guidance in Great Britain can be divided into four stages: the rise and development of vocational guidance (1907 - 1966); the transitional period from vocational guidance to careers guidance (1967 - 1976); the development of sociological approaches (1968 - 1976); and finally the expansionist period of careers guidance (1977 - present).

(1) Stage 1: The rise and development of vocational guidance 1907-1966

In the early years of this century in Britain, a few Local Education Authorities set up bureaux to help young people find employment. In 1907 the Cambridge Committee of the Charity Organisation Society instituted a Boys' Employment Registry. In Finchley, Finchley Local Labour Bureau was established with the object of ensuring that children would enter suitable jobs, and would avail themselves of the opportunity for further education and training at evening classes. In Edinburgh some social workers provided services to help young people adjust to employment. In the 1908 Scottish Education Act there was a clause to enable local education authorities to spend money from the rates on such a service (Carter, 1966, pp. 82-83).

However, the provision of nationally organised assistance for young people seeking employment began in 1909. Under the provision of the Labour Exchanges Act in 1909 the Board of Trade set up Labour Exchanges, afterwards called Employment

Exchanges, to provide information for people seeking employment and employers requiring workers. In the same year the Employment Exchanges established Juvenile Departments (Ministry of Labour and National Service, 1968, p.5) that were mainly concerned with placement in employment. No major changes in administration were made until 1948 when the Employment and Training Act was passed (Carter, 1966, p. 83).

The Employment and Training Act of 1948 required every school to register its pupils before they left school. Under the Act the overall responsibility at national level was held by the Ministry of Labour, through the Central Youth Employment Executive. This was staffed by officers from the Ministry of Labour, the Department of Education and Science and the Scottish Education Department. The Youth Employment Service was operated locally either by the Department of Employment through its local offices, or by the education authority in accordance with arrangements approved by the Secretary of State for Employment. The service was officially concerned with "persons under the age of 18 years and persons over that age who are for the time being attending school" (*Employment and Training Act*, 1948).

The Youth Employment Service had four main responsibilities: to disseminate information about jobs; to give vocational guidance; to help place leavers in suitable employment; and to keep in touch with young workers until they reached the age of eighteen. The chief means for disseminating information were School Talks and Careers Conventions. Through School Talks, Youth Employment Officers (later called Careers Officers) tried to give pupils a broad picture of the variety of occupations open to them, to urge them to ponder their real interests and aptitudes, and to encourage them to discuss the matter at home with their parents. At Careers Conventions, Youth Employment Officers, teachers, the Chambers of Commerce and

the trade unions co-operated to mount displays and give lectures and film shows. The School Leaving Interview, held during the last term at school, was the core of the Youth Employment Officer's work. The method of interview was the Seven Point Plan devised by Professor Alec Rodger of the Department of Occupational Psychology at Birkbeck College, University of London (Rodger, 1952). The object of the plan was to ensure that all relevant information was noted. The interview was viewed as a process of gathering information, giving information, and making recommendations. Information gathered from the client covered seven areas: physical make-up, including appearance, and any handicaps in speech or physique; attainment; general intelligence; special aptitudes; interests; disposition; and domestic circumstances (Rodger, 1952). The aim was to provide a simple but scientifically-defensible assessment system for matching individuals with available opportunities. Using the Seven Point Plan method, advisers are the major source of information on personal characteristics and occupational factors. Although a great deal of faith has to be put into the clients' own insight and understanding of themselves, guidance is based partially on the psychological findings and input of advisers.

During this period vocational guidance aimed to help young people match their own characteristics with job requirements through interview before leaving school. This method followed the American matching model of vocational guidance (see chapter 2). According to Kidd's survey in 1994 (Kidd et al., 1994), the seven point plan was still described in Diploma Courses in Careers Guidance in Great Britain, usually as an historical item. Among 508 samples in Kidd's survey, this model was the most familiar one to careers officers. Surprisingly, 30 per cent of them rated the seven point plan as "quite" or "very" relevant to their careers guidance practice. The matching model will be discussed in Chapter 2 and evaluated in Chapter 5.

(2) Stage 2: The transitional period from vocational guidance to careers guidance 1967 - 1976

At the end of the 1960s the concept of careers guidance introduced in the USA by Super and others began to cross the Atlantic. Super was invited to work in the Vocational Guidance Research Unit (now retitled the Counselling and Career Development Unit) at the University of Leeds in 1968, which disseminated the concepts of careers guidance. Various features of traditional vocational guidance came under attack. In particular, it was argued (Watts and Super, 1981, p. 2):

> (1) that emphasis should shift from discrete decisions made at particular points in time to the underlying and continuous process of career development through which individuals decided who they were and the kinds of lives they wished to and might lead;
>
> (2) that the matching process should be concerned not just with individuals' abilities and aptitudes, but also with their needs, values and interests: in other words, that it should cover not only what they could offer to their work, but also what their work could offer to them in terms of their total personality and life-style;
>
> (3) that guidance should be concerned not only with the matching of existing attributes but also with self-development and growth;
>
> (4) that guidance should be concerned not only with the choice of occupational roles, but also with the interaction between such choices and the individual's evolving constellation of leisure, family and community roles.
>
> (5) that the aims of guidance should not be to deploy expertise to make decisions for people, but rather to use it to help people make decisions for themselves.

These arguments had a considerable impact on the practice of careers guidance in Britain. Previously the primary tasks of guidance specialists had been seen as diagnosing the individual's attributes and prescribing appropriate occupations. Now their tasks were increasingly seen as being to facilitate and develop the individual's own decision-making skills. This was an educational conception of careers guidance, and began to take root in school curricula under the label of "careers education" (Watts, 1981).

In 1973 the Department of Education and Science published *Survey 18*, in which careers education was mentioned for the first time. It called for schools to develop careers education as part of the school programme (Department of Education and Science, 1973). However, school careers guidance developed rapidly in the 1980s.

(3) Stage 3: The development of sociological approaches 1968 - 1976

At the end of the 1960s careers development models were criticised, notably by Roberts (1968), who developed a sociological model of careers entry, called the opportunity structure model (Roberts, 1977, 1981). He concentrated on entry into work, but unlike Super, he saw little point in discussing careers choice. Instead, while accepting that America and other societies might offer more scope for choice, he stressed the limitations on opportunities inherent in the structure of British society, particularly in class and education. Roberts argued that occupational destinations were determined not by individual choices but by opportunity structure. People did not typically choose occupations in any meaningful sense: they simply took what was available. Careers guidance should therefore concentrate not on raising unrealistic expectations, but on helping people to adjust successfully within the opportunity structures open to them. The stratified occupational system,

recruitment policies, the nature of education and family/social class influences were regarded as dictating events. Therefore, attempts to increase occupational and self-awareness, as developmentalists would advocate, would be of marginal value and could create unrealistic aspirations. Roberts did not deny that some scope for choice existed, but stated that this was very limited and could be non-existent.

It was for careers officers and careers teachers that Roberts' research had most critical challenge. By arguing that opportunities were structurally defined and the allocation of workers heavily determined by family influence, educational and occupational selection, Roberts was also arguing that careers guidance intervention, however well meaning, was of marginal value. He suggested that attention should be redirected from school towards young workers, particularly the casualties of the crisis of unemployment. Guidance should help resolve practical issues of life and unemployment (see Chapter 2).

Roberts did considerable work in this field while at the University of Liverpool and his work found credibility, particularly in areas of high unemployment (Napier University of Edinburgh, 1992e). Roberts' model was attacked by several psychologists. Daws argued that the opportunity structure model only partly explained the process of work entry (Ball, 1984). First, the process of socialisation was essentially a conservative force and that while there might be considerable pressures on young people to follow occupations related to those of their parents, the role of careers guidance programmes and counselling intervention was to raise clients' awareness of the range of opportunities available. Second, increased participation in education and increasing social mobility had done much to blur the distinctions and divisions between social groups and their identities. Young people entering the labour market were less likely to be influenced by parents and cultural background in choosing occupations, the more they were exposed to the educational

process. Third, opportunity structure approaches undermined the enthusiasm of careers officers and careers teachers for their work.

(4) Stage 4: The expansionist period of careers guidance 1977 to the present

Although debate about these different conceptions of careers guidance continues, some ideas from both developmental approaches and opportunity structure approaches have been put into in practice. The term vocational guidance has been replaced by careers guidance. At the same time, occupational opportunity awareness is emphasised in careers guidance.

For example, the most widely accepted content of careers guidance in Great Britain is the four part list of objectives set out by Law and Watts (Law and Watts, 1977; Ball, 1984; Napier University of Edinburgh, 1992a; Lothian Regional Council, Education Department, 1994): the development of self-awareness; increasing opportunity awareness; the development of decision-making skills; facilitating transition learning.

Self-awareness This includes helping pupils to become aware of individual differences in terms of abilities, interests and personal needs and values. By appreciating these aspects of themselves, young people may be able to judge more accurately what type of occupation they are likely to find satisfying. As school pupils are developing all the time, this is an on-going aspect of the careers guidance programme, and may be covered in different ways at different stages. Records of achievement form a significant tool in developing this aspect of careers guidance.

Opportunity awareness Pupils can be introduced to the range of occupations available to them, and also to the routes they can follow to achieve their aims. In addition to details of higher and further education opportunities and careers information sources, pupils can be introduced to the general concept of work and training, the structure of employment in their community, how to look at occupations in some depth and how to analyse their differences by grouping exercises. By doing this pupils should be able to relate the information they have built up about themselves to the information they have collected about occupations.

Decision-making skills Pupils need help in developing strategies for decision-making. They have to be able to assess information critically, become aware of the implications of choice and the consequences of their decisions. They should be encouraged to be self-directing and to use guidance services as an aid to their own decision-making.

Transition learning This aspect has also been part of careers guidance for a long time, often in the form of a "leavers' course" where pupils learn about finding and starting work, and are given help to acquire coping skills. Adjustment to life after school can present major problems to some young people. This aspect of careers guidance, if properly dealt with, could be useful for any individual coping with changes in life later on.

In the 1980s a series of documents was published showing that official policy supported careers guidance for all secondary school pupils, such as *More Than Feelings of Concern* (Scottish Consultative Council on the Curriculum, 1986), *Working together for a Better Future* (The Department of Employment, the Department of Education and Science, and the Welsh Office, 1987), *Careers Education and guidance from 5 to 16: Curriculum Matters 10* (The Department of Education and Science, 1988).

More Than Feelings of Concern was the key document in careers guidance in Scotland, giving an up-to-date picture of careers guidance in Scottish schools. This document acknowledged that careers education should be more broadly based than previously and should relate to decisions young people have to make concerning social, leisure and educational activities as well as jobs. It was all about life style in general.

> The Scottish Central Committee on Guidance believes that the relevance of present approaches to careers education will only be apparent to many pupils and their parents if they are seen to apply in the widest context. (Scottish Consultative Council on the Curriculum, 1986, p.27).

More Than Feelings of Concern (Chapter 7: Careers Education) pointed out that careers guidance should be timetabled for all pupils, at least from the second year of secondary school (S2) onwards because subject choices were made at the end of S2. Careers officers and guidance staff should work together. Careers officers' commitment to schools included: working with pupils individually and in groups; assistance in the planning of careers education within the school; assistance in updating and maintaining careers' information including computer aided systems, such as Job Ideas and Information Generator Computer Assisted Learning (JIIG-CAL), which had been adapted to suit the Scottish education system; supply of information on the current post-16 situation for guidance staff through regular meetings and discussion; availability at parent contact meeting. The guidance staff's commitment to their careers officer included: preparing pupils for interview by careers officers; providing accurate, up-to-date information on all pupils who were to be interviewed by the careers officers; ensuring that a mutually agreed careers education programme was implemented; and acting as an information resource for

the careers officer on current educational developments and curricular changes (Scottish Consultative Council on the Curriculum, 1986).

However, although this document has been available for almost ten years, little study has been done to assess school careers guidance. It is therefore necessary to explore whether Scottish schools could follow this document to develop careers guidance, whether guidance staff and careers guidance could work together effectively, and whether JIIG-CAL is welcomed by careers officers and is helpful for pupils when choosing their careers. Parts of Chapter 8 will explore these topics.

Since the 1980s careers guidance has seen a move away from traditional advice and information-giving models of guidance and should be seen as part of a continuous process of change and decision-making over a life span.

One of the results of careers guidance in practice was to develop the links between schools and industry. Traditionally in Britain the divide between "vocational" and "academic" was wide and very difficult for individuals to cross. Many pupils left school without any vocational skills and found difficulty getting employment. In order to solve this problem, a series of reports was published stressing the need for improving links with the world of work and for using industry as a resource for education, including the White Paper, *Better Schools* in 1985, and *The Business/Education Task Group report* in 1988. A number of special measures were taken on schools industry liaison, such as the Technical and Vocational Education Initiative (TVEI) and Work Experience in secondary schools (Napier University of Edinburgh (f), 1992).

TVEI was introduced in 1983 in England and Wales, and in 1984 in Scotland. TVEI attempted to modify traditional secondary education and move it in a more vocational direction (Raffe, 1988).

TVEI was designed to give 14- to 18-year-old pupils of all abilities a more relevant and practical preparation for adult and working life (Bell, King, Howieson and Raffe, 1988). TVEI had five main aims (Labour Market Quarterly Report, 1989): relating the whole curriculum to the world of work; equipping all young people with the knowledge, competencies and qualifications for working in a highly technological society which is itself part of Europe and the world economy; providing young people with direct experience of the economy and the world of work, e.g. through work experience, work shadowing, projects in the community; enabling young people to learn how to be effective, solve problems, work in teams, be enterprising and creative through the way they are taught; making sure that young people have initial guidance and counselling, and opportunities for education and training, and progression throughout their lives.

In some areas projects stressed technological aspects and others concentrated on personal and social development. But there was a core that was common to all TVEI pupils and options. In Scotland the core usually included information technology, personal and social development, careers education and work experience (Napier University of Edinburgh (a), 1992).

Work experience is a Government policy emphasising that pupils of all abilities should have the opportunity to participate in at least two weeks of work place activities before leaving school. The educational objectives of work experience are outlined in *Careers Education and Guidance from 5 to 16: Curriculum Matters 10* as follows (The Department of Education and Science, 1988): promoting a knowledge of industrial, commercial and public employers in the area and an understanding of how they function; assisting the development of personal and social skills such as the ability to operate in groups, take responsibility, relate to adults in a place of work and to adjust to a culture outside school; promoting realistic but challenging

aspirations; assisting pupils in choosing a future occupation; erasure of stereotyping; giving and understanding of the rewards and strains of employment; helping to motivate pupils by enabling them to see aspects of the curriculum as having meaning and relevance for particular interests and aspirations. Work experience is one of the main methods in careers guidance. However, although work experience is widely used to aid the process of careers choices in secondary schools, Jamieson (Jamieson, 1994) found that there was little evidence that it has much effect. A part of Chapter 8 will explore pupils' opinions and perceptions of work experience.

Although the concept of careers guidance came from the U.S.A, the content of school careers guidance has been adapted to make it more acceptable in Britain. First, because of the serious problem of unemployment, careers guidance emphasises the development of young people's job opportunity awareness. Second, careers guidance provides young people with work experience so they understand different occupations and local labour markets and appreciate the range of job opportunities. Third, careers guidance emphasises the links between school and industry in order to prepare school pupils for working life.

In addition, since the 1970s several computer-assisted careers guidance programmes have been developed and applied in schools. These programmes can be classified into two types. One type of programme is used to help pupils match their preferences with higher education courses, such as HEAC (Higher Education Advisory Centre, Middlesex Polytechnic); HOLYSCAN (North Staffordshire Polytechnic); and CENTIGRADE (Cambridge Occupational Analysts Ltd). The other type of programme is used to help pupils match their preferences and/or attributes with occupations, such as JIIG-CAL (Job Ideas and Information Generator - Computer Assisted Learning, Edinburgh University); CASCAID (Careers Advisory Service Computer Aid, Leicestershire County Council); CACVG (Computer Assisted

Career and Vocational Guidance, Kelsterton College of Technology); JOBSPY (Hatfield Polytechnic); and ICGS (Interactive Careers Guidance System, Cheshire County Council and IBM). Computer-assisted careers guidance will be examined in Chapter 8 in a Scottish setting.

The system of school education and the reform of careers guidance in Scotland in the 1990s

The comparative study in Britain was to be conducted in Edinburgh. It is therefore necessary to describe the Scottish education system and the reform of careers guidance at present. Since 1990 a series of reforms have been taking place in the education system and in careers guidance in Scotland. These reforms have a direct influence on school careers guidance practice.

Secondary school system

Pupils enter secondary school at the age of 12. Some enter private schools but most attend area comprehensive schools which provide a full range of courses appropriate to all levels of ability.

During the first two years, pupils normally follow a common course of subjects. Certain adjustments are made, however, to enable the most able pupils to undertake the study of, for example, additional subjects such as first or second foreign languages. When pupils enter secondary education they are normally organised into classes on a mixed ability basis but the majority of schools introduce some forms of streaming, broad banding or setting by the second year, at least in mathematics and modern languages. Most schools have special arrangements to provide for their slow learners, usually putting them in separate classes or withdrawing them for the teaching of basic language and mathematics skills (Napier University of Edinburgh,

1992d).

At the beginning of the third year pupils are allocated to general courses with a practical or vocational bias or to a full certificate course which leads to presentation for the Scottish Certificate of Education Examinations. In the third year, the number of subjects studied by any one pupil may be reduced, but the range from which the subjects are drawn is considerably widened by the addition of subjects not studied in the earlier years, such as economics (Napier University of Edinburgh (d), 1992).

School examinations

Standard Grade

Standard Grade replaced Ordinary Grade in 1986. Standard Grade has three levels of question paper: Foundation, General and Credit. Candidates are encouraged to attempt two adjacent levels. In this way everyone should be able to do an 'easier' paper and a more demanding one. Each paper covers two grades as follows: Credit, Grade 1 and 2; General, Grade 3 and 4; Foundation, Grade 5 and 6. Grade 7 is a 'course completed' grade indicating that the candidate has followed the full course, has satisfied all the requirements for coursework and so on, but has not met the minimum level of competence required for a Grade 6 (Kimber, 1989).

Higher Still National Development Programme

Higher Grade is normally taken in S5 and S6, over one or two years, and is the basic qualification for entry to higher education for Scottish school leavers. In March 1992 the report of the Howie Committee, set up to review curriculum and examinations in S5 and S6, was published. The basic proposals were that pupils would be offered a choice of routes according to ability, leading to the Scottish Certificate (SCOTCERT) or the Scottish Baccalaureate (SCOTBAC). This would entail

prospective higher education pupils following a course up to S6, removing the possibility of going to university after S5. Ways of ensuring parity of acceptance of SCOTCERT and SCOTBAC were to be built into the system (Scottish Office, Education Department, 1992).

In March 1994, the Scottish Office, in its response to the report of the Howie Committee, set out its policy statement on the future shape of courses, assessments and certification for young people in the upper years of secondary education in Scotland. The main impact will be on S5, S6, and non-advanced further education. There was general agreement with the Howie Committee's definition of the characteristics of a good upper secondary education system and support for their analysis of weaknesses in the current system. Although some reforms are being made, one key aspect of the proposals, separating SCOTBAC and SCOTCERT pathways, was rejected. Highers would remain, but the course would be modular. Pupils' achievements in S3-S4, in Standard Grade and other courses, would count towards the award of a National Certificate. Pupils would be able to take whatever mix of academic and vocational courses was most appropriate to their needs and gain marketable qualifications in the form either of National Certificates or Highers/Advanced Highers, both leading to higher education. For pupils who do not wish to undertake more advanced levels of study there would be an externally assessed exit point at Higher level. Candidates continuing with more advanced levels of study would be encouraged to bypass the external examinations at Higher level in S5, thus reducing the time spent on examinations. The Certificate of Sixth Year Studies (CSYS) would disappear. Advanced Higher courses would be developed, incorporating the CSYS content and building in Highers to provide coherent, challenging, 2-year courses of 320-hours.

The changes are scheduled for implementation from 1997/8 with a major

development programme commencing in 1994/5 (Scottish Office, March 1994).

Management of the Careers Service from 1995

Under the *Trade Union Reform and Employment Rights Act 1993*, responsibility for the provision of a careers service was transferred from the Education Authorities to the Secretary of State for Scotland. Since April 1995 the management of the careers service has became a partnership between the Education Authority and the local Enterprise Company. For example, in Lothian Region, the careers service has been operated by the Education Department and Lothian and Edinburgh Enterprise Limited (LEEL). This Act aims to help schools develop the links between education and industry in order to improve the implementation of careers guidance (Secretary of State for Scotland, 1993). However, it is important to consider whether this Act could be implemented by schools, and whether it could help pupils link to the world of work. This topic will be further discussed in Chapter 10.

Training credits

Training Credits were launched by the government in April 1991 and will be offered to every 16- and 17-year-old leaving full-time education by 1996 in Britain (*Education and Training for the 21st Century*, 1991). A training credit is a voucher, usually in the form of a credit card, which holds a value of around £1000. These credits are allocated to young people on leaving school and are designed physically and symbolically to place the money to pay for subsequent training in their own hands (MacDonald, 1993).

Different regions have chosen their own names for the Training Credits: Lothian Region in Scotland calls them "Skillseekers". Since May 1995 the Skillseekers Card has been the means of funding entry to youth training for all school leavers entering

the labour market in Lothian Region. Training Cards have been issued to all school leavers throughout mainland Scotland since 1995 (Lothian Region Council, Department of Education, 1994).

The government's aims for Training Credits were three-fold (*Education and Training for 21st Century,* 1991). First, Training Credits would increase young people's motivation to train by placing the power to acquire training in their own hands; second, they were designed to have the effect of improving the quality of training, which should be enhanced as trainees look for the best places to spend their credits; third, their introduction was aimed towards meeting the goal of increasing employer involvement in training.

School careers guidance in Scotland now therefore follows three steps: (1) the development of self-awareness and the examination of pupils' own interests, abilities and aptitudes; (2) the matching of personal characteristics with occupational types; (3) the exploration of occupational opportunity and making occupational decisions. The current reform of Training Credits is based on the assumption that young people can use rational decision-making techniques to discover the best careers option for them after school careers guidance. However, Hodkinson et al (1994a) found that the decisions young people took were not based on these three steps, but grounded in their previous personal experience and their cultural background. This topic will be discussed later.

(5) Summary

Careers guidance in Britain has been developing for 78 years. From 1907 to 1967, vocational guidance mainly followed the matching approach (seven point plan). This method is still used by some careers officers today (Kidd et al., 1994).

Since the 1970s the concept and content of careers guidance have changed enormously under the influence of the American developmental model. The term vocational guidance has been replaced by careers guidance, which has become a process and part of the school curriculum. With the rising popularity of the opportunity structure model in the 1980s, the importance of occupational opportunity in careers guidance has become accepted.

However, insufficient work has been done to test out careers guidance in a Scottish context. Although a number of government policies were issued and several measures were taken on developing school careers guidance, very limited research has been done on whether schools could implement these policies and whether these school careers guidance interventions, such as work experience, could achieve their aims. If not, it is necessary to explore the reasons why in order to improve the practice of careers guidance.

In an attempt to study the topics mentioned above it is necessary to explore the following areas: the development and process of young people's careers decisions; the factors influencing young people's careers decisions; the function of school careers interventions in young people's careers considerations, and the careers needs of pupils and the requirements of careers officers.

3. Summary and discussion

(1) Summary

Careers guidance in China has followed tortuous roads. Table 1.1 summarises the stages, principles and main content of the development in China.

Table 1.1. Stages, principles and main content of careers guidance in China

	Stages	Principles	Main content
1917-1949	The Rise of Vocational Guidance: China Vocational Education Association contributes to this work, which was influenced by American Vocational guidance.	To solve the problem of livelihood; to help unemployed people get jobs; to make employed people happier in their work.	Setting up vocational guidance centres to help people find suitable jobs; setting up vocational educational centres and vocational schools to train people with vocational skills based on occupational needs.
1950-1965	Re-orientation: Polytechnic Education in former Soviet Union was introduced in ordinary secondary schools in China. From 1958 Polytechnic Education was replaced by a course on labour education.	To encourage young people to be skilled workers and peasants.	Teaching pupils of ordinary secondary schools labour skills, which were needed in industry and agriculture.

1966-1976	Abandonment of Vocational Guidance during the Cultural Revolution.	To serve the political purpose.	Sending all young people to the countryside without choice.
1977-1986	Transitional Period in Careers Guidance: with the reforms of economy and education, careers guidance becomes urgent work.	Economic reform: decentralising management and multi-economic systems. Education reform: developing vocational and technical education; to stream 50 per cent of secondary school leavers into vocational and technical education.	Careers guidance had not been put into practice.
1987-1989	Experimental Period: careers guidance experiments were carried out in Shanghai and Beijing; the first National Conference on Careers Guidance was held in 1987.	As above	Helping pupils understand their interests and abilities, gain careers information, and choose suitable vocational training through school careers guidance activities.
1990-Present	Expansionist Period: the National Careers Guidance Association was set up in 1993.	As above	As above

The rise of careers guidance in China was sponsored mainly by the Chinese Vocational Educational Association (CVEA). At this stage vocational guidance followed the American matching model, matching personal characteristics with job requirements. CVEA attempted to solve the problems of unemployment and society through vocational education and vocational guidance. The CVEA

trained many people to be skilled workers and helped hundreds of people find jobs. However, vocational guidance was determined by local politics, economy and employment policies. In 1949 China was taken over by the Chinese Communist Party, which used a centralised placement system. This meant that the government arranged all people's jobs and people had no freedom to choose jobs. In the 1950s polytechnic education from the former Soviet Union was introduced in Chinese schools. Young people had to learn general labour skills and they were encouraged to be skilled workers and peasants. Vocational guidance was stopped and all people had to obey local government's job arrangements. During the Cultural Revolution from 1966 to 1976 all young people were sent to the countryside to accept poor peasants' political education without any choice. From 1977 to 1986 there was a big shift in economic, educational and employment policies in China. The decentralising management, multi-economic systems and implementation of contact jobs gave employers and employees more freedom to choose each other. Education reforms that stressed the development of vocational and technical education meant that many school leavers had to choose their vocational training by themselves at the age of 16. Careers guidance was becoming an important task. In 1987 careers guidance experiments were started in several schools in Shanghai and Beijing. Since 1993 all school leavers and university graduates have had to look for jobs by themselves. Employers and employees have full freedom to choose each other. Careers guidance is accordingly needed urgently. However, with decentralised management, all enterprises have been responsible for their own profit. It is difficult for social scientists to gain research funding from the government because research is a non-profit-making activity. The Chinese Careers Guidance Association finds it difficult to survive because of the shortage of funds. Although many schools have conducted careers guidance, they need a

professional organisation to provide a strategy, evaluation, information and counselling, etc.

Careers guidance in Great Britain has been developing for 78 years. Table 1.2 summarises the stages, principles and main contents of the development in Great Britain.

Table 1.2. Stages, principles and main content of careers guidance in Great Britain

	Stage	Principles	Main content
1907-1966	The Rise and Development of Vocational Guidance	To help people seek and gain suitable employment.	Disseminating information about jobs; giving vocational guidance; helping place leavers in suitable employment; and keeping in touch with young people until they reached the age of eighteen. Matching approach: seven point plan.
1967 - 1976	Transitional Period from Vocational Guidance to Careers guidance	Careers development was a process. Careers guidance would facilitate decision-making processes and develop decision-making skills and competencies.	Develop careers guidance programmes as an important part of school education.

1968 - 1976	The Development of Sociological Approaches	Occupational destinations were determined not by individual choices but by opportunity structure.	Careers guidance intervention was of marginal value. Careers officers attempted to turn their attention from school towards unemployment.
1977 - present	The Expansionist Period of Careers Guidance	Careers guidance should prepare young people for adult life; to develop self-awareness, opportunity awareness, decision-making skills, and transition learning.	Relating school education to the world of work; work experience; careers counselling; training credits; linking schools with enterprises.

In Great Britain vocational guidance was introduced to help people find suitable jobs, using the seven point plan approach which followed the matching model. From the end of the 1960s to the 1970s both the developmental model and the opportunity structure model were developed because of the serious problem of unemployment. The application of the developmental model aimed to help people get jobs through a process of careers guidance. The opportunity structure model supposed that young people had little chance to choose jobs and they simply took what was available. In the situation of high unemployment, careers guidance should focus on unemployment.

The principles and main content of the first stage of vocational guidance in Britain is similar to the first stage in China. The purpose of vocational guidance at this stage was to help people find suitable jobs through vocational services. However, unlike in China, careers guidance was not interrupted by the reforms

of politics and the economy. For a long time employers and employees have had to choose each other, so careers guidance was always aimed at people who had the freedom to choose their jobs. The main content of careers guidance was changing with economic and employment reforms and American careers guidance experiences. Since the 1980s careers guidance in Great Britain has focused on links between school education and the world of work in order to help people widen their careers choices.

(2) Discussion

From 1917 to 1949 China adapted America's matching approach of vocational guidance - matching personal characteristics with job requirements and opportunities - to help people look for jobs. From 1907 to 1966, as in China, the purpose of vocational guidance in Great Britain was to help people find suitable jobs through vocational services. Vocational guidance practice followed the seven point plan, a revision of the matching approaches.

In China, for political and economic reasons, careers guidance was abandoned from 1949 to 1976. With the reforms of the economy and employment policies since 1977 Chinese people in urban areas have had more and more freedom to choose jobs by themselves and careers guidance has become urgent work. However, in Great Britain, careers guidance was not interrupted by changes in politics and the economy. Employers and employees had to choose each other, so careers guidance was needed at all stages. But the content of careers guidance differs from one stage to another. Since the 1970s the influence of developmental approaches has caused vocational guidance to be replaced by careers guidance. Careers guidance have become a part of school education, and go well beyond

simple careers counselling. Since the 1980s careers guidance have emphasised the liaison between school and enterprise in order to help pupils gain employment. This is a direct result of the unemployment in Great Britain. In China, although careers guidance has been implemented in several big cities, very limited work has been done to assess careers guidance. In Great Britain, the debate on careers guidance approaches continues, but at the same time many of the approaches have been put into practice.

The task ahead for both China and Great Britain is to examine careers guidance models and practice in order to improve current situation. This study will explore pupils' experiences and perception of school careers guidance in order to assess careers guidance, using case studies in Shanghai and Edinburgh.

Chapter 2 will introduce and evaluate the main careers guidance models that have had a strong influence on Chinese and British careers guidance.

CHAPTER 2

THE MODELS OF CAREERS GUIDANCE

Chapter 2: The Models of Careers Guidance*[1]

1. Introduction

Since 1909 many careers guidance models have been put forward in America and other countries. In Great Britain, a series of careers guidance models has been introduced in the period. They include Parson's matching (trait-factor) model; Holland's personality type model; Super's developmental model; Roberts's opportunity structure model; Roe's psychodynamic model; Law's community interaction model; and Krumboltz's social learning model (Watts and Super, 1981; Napier University of Edinburgh, 1992e; Kidd, 1994).

A number of careers guidance models from America have been introduced to China: Parson's matching (trait-factor) model; Holland's personality type model; Super's developmental model; Roe's psychodynamic model; and Krumboltz's social learning model (Jin Yiming et al., 1991). At certain periods this century vocational guidance

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[1] In the major literature in the field of careers guidance, these models mentioned in this chapter are called theories. For example, in the book, *Careers Development in Britain*, published in 1981, which was co-edited by Tony Watts, one of the foremost authorities in careers guidance in Britain, and Donald Super, who held a similar position in the U S A, the different approaches to careers guidance are referred to as theories. However, the present author's opinion, after extensive study of the subject, is that careers guidance is an applied science rather than a theoretical one. Considered in this light, the existing so-called careers guidance theories are actually models on how to conduct careers guidance rather than being philosophical and theoretical formulations. The author has therefore chosen to use the term "model" rather than "theory" in this dissertation.

had been replaced by polytechnic education and the re-education model.

Some of the above careers guidance models have had only a minor influence on careers guidance practice in China and Great Britain. According to a survey conducted in 1994 (Kidd, 1994, p. 386), the Diploma of Careers Guidance courses was offered by 15 educational institutes, mostly universities in Great Britain. Four careers guidance models proved to be the most popular: the matching model, the developmental model, the personality type model and the opportunity structure model. Other careers models were less well known among careers officers.

Recently in China a series of careers guidance textbooks, which were recommended by the State Education Commission of China as textbooks to train guidance teachers, has adapted three careers guidance models: the matching model, the developmental model and the personality type model. First, the textbook *Careers Guidance in Secondary Schools (Textbook for Guidance Teachers)* employed the matching approach. The three main chapters (chapters 4, 5 and 6) of the book covered the following topics: understanding occupations, understanding ourselves, and knowing how to make careers decisions (Jin Yiming et al., 1991, pp. 1-2). Second, *Careers Guidance in Secondary Schools (Textbook for Guidance Teachers)* emphasised that careers choices were a process of development and that careers guidance should be available to all pupils (Jin Yiming et al., 1991, p. 58). Third, Holland's personality type model was adapted in the book *An Introduction and Classification of Occupations* (Zhang Sugui, Zhang Weiyuan et al., 1991).

The textbook *Careers Guidance in Secondary Schools (Textbook for Guidance Teachers)* proposed a new idea that careers guidance was to help people find the combination point between personal characteristics and

the needs of the community (Jin Yiming et al., 1991, p. 60). This model is termed the "Combination Model" by the present author in this paper.

Careers guidance models - namely the matching model, the developmental model and the personality type model - have had a strong influence on careers guidance practice in both China and Great Britain. The opportunity structure model is important in Great Britain (see Chapter 1). Although this model has not been introduced in China, it is obvious that young people's careers choices in China are limited by their academic attainments. Polytechnic education and the re-education model were once dominating models in the history of Chinese education. At present China is creating a combination model.

However, it is important to explore whether these careers guidance models could be applied effectively in the setting of China and Great Britain.

This chapter will describe and evaluate seven careers guidance models: the matching model; the personality type model; the developmental model; the opportunity structure model; polytechnic education; the re-education model; and finally the combination model. Parts of Chapters 4, 5, 6, and 10 will examine these models through case studies in Shanghai and Edinburgh.

The background to the careers guidance movement in the 1920s

Vocational guidance originated in European countries at the end of the nineteenth century. But at the beginning of this century American vocational guidance developed rapidly, making America the centre of the vocational guidance movement. This was due to a number of important factors.

The first factor was the tremendous growth of industry and the economy in the United States in the latter half of the nineteenth century. In 1860 the American economy had been among the most productive in the world in terms of both aggregate output and per capita income. By 1910 Americans had developed their economy into the unchallenged world leader (Puth, 1988, p. 270). Economic growth was the result of industrial growth. From the 1850s America began to change from an agricultural economy to an industrial one. In 1859 agriculture contributed about 62 per cent of the total value in commodity production while industry produced only 38 per cent. By 1880 the contributions of the two sectors were about equal. In 1909, however, industry's share was almost three times that of agriculture: 74 per cent versus 26 per cent (Puth, 1988, p. 313). The development of industry gave rise to a huge number of new industries, many of them of a mechanical nature. Young people could no longer learn work skills at home from their parents, and the increasingly complex world of work made it very difficult for young people to accumulate occupational information and learn about occupational requirements. Helping young people to find suitable jobs was becoming a serious social problem in the United States.

The second factor to stimulate vocational guidance was immigration. With the development of industry and the exploitation of the western frontier, shortage of labour was becoming a serious problem in the 1850s in the United States. The American government adopted measures to encourage immigrants to find work in the 1860s. From 1865 to 1920 over 28 million people entered the United States. This number was almost equivalent to the nation's entire population just prior to the Civil War. One of the most urgent tasks was to find suitable work for these immigrants.

The third factor was a change of ideology. Some reformers and educationists, such as John Dewey who was mentioned in Chapter 1, appealed for more democratic education. School education, he asserted, should develop pupils' knowledge, interests and abilities. In a modern industrialised and democratic society everyone should have the freedom to choose their occupations. It was argued that society and schools should be responsible for helping pupils find suitable occupations (Dewey, 1916).

Last, but not least, was the emergence of human science. Psychophysiology was developed in the first half of the nineteenth century and, subsequently, psychophysics and experimental psychology. In 1890 Dr James Mckeen Cattell attempted to use psychological testing to measure the differences between individuals in Columbia. In 1896 the first psychological clinic was established by Lightner Witmer at the University of Pennsylvania (Crites, 1981). Psychological testing provided an essential instrument for vocational guidance.

The development of the economy and the change of ideology thus gave rise to a need for vocational guidance, and the development of psychology made vocational guidance possible. Some reformers in the United States began to do vocational guidance in the early 1900s, and by the 1920s there was a vocational guidance movement that was followed in many countries, among them Britain and China.

2. Matching (trait-factor) model

In 1908 Frank Parsons, the pioneer of the American vocational guidance movement, organised the Vocational Bureau to carry out vocational guidance in the Civil Service House in Boston. The activities of the

Bureau included conferences with persons who wished vocational guidance, conferences with school workers, employers, labour unions, social workers, legislators, and others who were interested in fostering guidance programmes; correspondence about plans and policies; courses and lectures at interested institutions; and investigations leading to publications on guidance (Keller, 1937, p. 31).

Parsons died in 1908 and his work was taken over by Meyer Bloomfield, director of the House. In 1917 the Bureau was moved to the School of Education at Harvard University, and renamed the Bureau of Vocational Guidance (Keller, 1937, p. 34).

Parsons summarised his work in the book *Choosing a Vocation* (1909) in which he identified three basic variables in vocational guidance: the individual, the occupation and the relationship between the two. He outlined his model of matching personal traits to job characteristics. According to Parsons (1909, p. 5):

> In a wise choice there are three broad factors:
>
> (1) a clear understanding of yourself, your attitudes, abilities, interests, ambitions, resources, limitations and their causes;
>
> (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities, and the prospects in different lines of work;
>
> (3) true reasoning of the relations of these two groups of factors.

This book was generally acknowledged to be the first statement of the aims of vocational guidance, and it laid the foundation for the development of the matching model.

This approach to occupational choice was typified in practice by the work of Strong in the field of vocational interest measurement (Hopson et al., 1968). By this, the likes and dislikes of various occupational groups were ascertained, and individuals were ranged against these measures to see which of the occupational interest profiles was most like their own. For example, if a person's profile emerged more like that of an engineer than of any other occupational group, he or she was told that here was a job that would suit him or her as far as interests were concerned. By a similar process, his or her aptitudes and attainments could be assessed objectively to discover if he or she could succeed in the job as well as being interested in it.

Parsons' model were developed by Williamson, who assumed that clients had one of four possible problems (Williamson, 1950, p. 99):

> No choice: When asked which occupation they intend to enter after completing formal education or training, clients are unable to state a choice, usually responding with 'I do not know what I want to do'.
>
> Uncertain choice: The client has chosen a career, and can verbalise it as an occupational title, but expresses doubt about the decision.
>
> Unwise choice: Defined as a disagreement between a client's abilities and interest on the one hand, and the requirements of occupations on the other, this category encompasses all possible combinations of these variables. Usually, however, unwise choice refers to a career decision for which the client has insufficient aptitude.
>
> Discrepancy between interests and aptitudes: Included here are three types of discrepancies: interest in an occupation for which the client's aptitude is less than requisite; interest in an

occupation below the client's ability level; and interests and abilities at the same level but in different fields.

Williamson further delineated six steps of this process used in vocational guidance for pupils (Williamson, 1950, p. 101): analysis, synthesis, diagnosis, prognosis, counselling (treatment) and follow-up. Analysis referred to the collection, from a variety of sources, of data which provided an adequate understanding of the pupil; synthesis referred to the summarising and organising of the data from analysis in such a manner as to reveal the pupil's assets, liabilities, adjustments and maladjustments; diagnosis referred to the clinician's conclusions concerning the characteristics and causes of the problems exhibited by the pupil; prognosis referred to the clinician's statement, or prediction, of the future development of the pupil's problem; counselling referred to the steps taken by the pupil and by the counsellor to bring about adjustment and readjustment; follow-up included what the clinician did to assist the pupil with new problems, with recurrence of the original problems, and what was done to determine the effectiveness of counselling.

The first four steps in the process are centred on the adviser, while only the last two are centred on the client. Thus, the adviser is the major source of information on characteristics and occupational factors (France, 1986). Williamson's six steps of vocational guidance were an attempt to make Parson's three step matching model more specific.

In Britain the matching model was the dominant model of vocational guidance from the 1910s to the 1960s. The aim of vocational guidance was to help people match their personal characteristics with occupational requirements. The Seven Point Plan, which in the 1950s and early 1960s

held sway as the main framework for the practice of vocational guidance in Britain, was to provide a simple assessment system for matching individuals to occupational requirements and available opportunities (see Chapter 1). The Seven Point Plan developed the matching model to make the content of matching more specific.

From 1917 to 1947 China accepted the matching model on which to base its own vocational guidance system. Aims of vocational guidance were listed by the Chinese Vocational Education Association (CVEA) (Huang Jiashu, 1987): to investigate important local occupations; to assess pupils in their final year at school in terms of age, academic achievement, physical ability, personality and occupational preference; and to collect information on vocational opportunities and requirements. The CVEA arranged for its members to give vocational lectures and counselling to school leavers. The purpose of vocational guidance was to provide occupational information, and to advise young people on how to choose a job based on their personal characteristics and on occupational requirements.

However, the matching model has some shortcomings. First, it does not really tell us why a person chooses one job in preference to another, or how he or she makes a choice; second, psychological testing is crucial in the matching model, and yet there is increasing evidence to question its accuracy and general applicability; third, this model neglects some important factors in people's careers choices, such as family background and sociological conditions; last, the entire process of matching could be mechanised, and therefore computerised. If the matching model were to be really effective, the computer might replace careers counsellors. This model will be examined in Chapters 4 and 5 and computer-assisted careers guidance will be evaluated in Chapter 5.

3. Personality type model

The personality type model was developed by John Holland. There were four assumptions behind the model (Holland, 1966). First, he argued that most people could be categorised into one of six types: realistic, investigative, artistic, social, enterprising or conventional; second, there were six environmental types that corresponded with these personality types; third, people searched for an environment that would let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles; and last, behaviour was determined by interaction between personality and the characteristics of the environment.

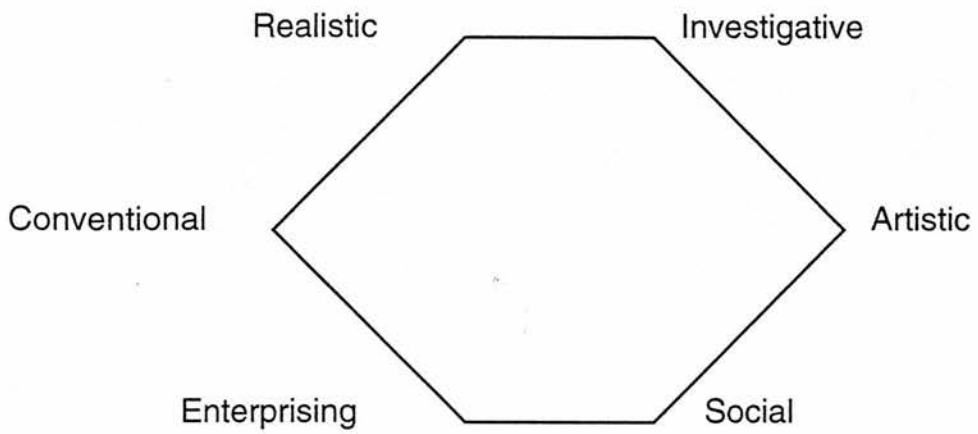
Holland described his six personality types and work environments in some detail (Holland, 1966). (1) The realistic type: the work required mechanical, manual, technical or agricultural skills and practical, concrete problem solving. Realistic people tended to be practical, materialistic and uninvolved with others. They valued strength and tangible results and lacked interpersonal skills. (2) The investigative type: the work required scientific and mathematical abilities and intellectual problem solving. Investigative people tended to be analytical, introspective, complex. They valued the scientific approach to life and lacked social leadership skills. (3) The artistic type: the work required the use of creative skills in an unsystematised environment. Artistic people were usually imaginative, expressive, sensitive, non-conforming. They valued freedom, ambiguity and aesthetics, and lacked skills in the orderly manipulation of data. (4) The social type: the work required social, educational and therapeutic skills. Social people tended to be co-operative, ethical, responsible, understanding and friendly. They valued interpersonal relationships and lacked mechanical and scientific skills. (5) The enterprising type: the work

involved percussive, manipulative and leadership skills. Enterprising people tended to be ambitious, extroverted, domineering and self-confident. They valued success in the political and economic fields and lacked scientific abilities. (6) The conventional type: the work involved the systematic organisation and manipulation of data. Conventional people tended to be methodical, conforming, conscientious, unimaginative and practical. They valued organisation and achievement in business and lacked artistic skills.

Holland (1971) proposed three additional concepts: (1) consistency: some types had more in common with other types; (2) differentiation: some people and some environments were much closer to one type, whilst other people and environments were much more a mixture of types; (3) congruence: there were degrees of fit between people and environments.

Holland (1971) suggested that some of the six types were closely related to others, while some were more distantly related. The result was a hexagonal model of types, with types at the adjacent angles more closely related than those at the intervening angles, and with types at the intervening angles more closely related than those at the opposite angles (see Figure 2.1).

Figure 2.1: Holland's Hexagonal Model of Relationships between Six Personality Types



Source: Holland, J. L. 1971. *A Counsellor's Guide to the Self-Directed Search,* California, Palo Alto Consulting Psychologists Press.

Holland assumed that most people had a dominant type and streaks of one or two other types.

In support of his model Holland developed two measures of occupational interests and ability: the Vocational Preference Inventory and the Self-Directed Search (SDS) (Holland, 1974).

Holland combined a practical approach with his models of personality. He postulated that an interest inventory was a personality inventory and that people sought an environment congruent with their personality. He based his vocational interest inventory on six major personality types who would tend to choose among six main occupational environments where they could use their abilities, interests and aptitudes, and share with other occupations common attitudes and values. In this respect Holland's model

bears similarities with the matching model.

Weinrach (Weinrach, 1979) pointed out some shortcomings of Holland's model. First, Holland's research lacked data on women. Second, his model did not explain how people became the types they were, which could be regarded as a major weakness.

From the clinician's point of view, the model has probably had its greatest impact through its instrumentation. Both the Vocational Preference Inventory and the Self-Directed Search have been widely used by vocational counsellors in the United States and Canada, and experimentally in China and Britain. However, if this model is seen as a reversion to the matching model, it therefore assumes the shortcomings. Considering that Holland's approach has been used in some schools in China and Great Britain (Zhang Sugui and Zhang Weiyuan et al., 1992; Kidd, 1994), it is necessary to test whether the approach could be more widely applied in modern society (see Chapters 4 and 5).

4. Developmental model

Ginzberg, Ginsburg, Axelred and Herma were credited with being first to emphasise the developmental aspects of occupational choice. In 1951 they concluded that occupational choice was an irreversible developmental process, and one that ended in a compromise between interests, capacities, values and opportunities (Ginzberg et al., 1951).

Ginzberg et al. proposed that the process of occupational choice, lasting from childhood to late adolescence and young adulthood, followed three developmental stages (Ginzberg et al., 1951). The first stage was called the fantasy period (before age 11), when occupational choices were controlled

by needs and impulses. Occupational preferences were first determined by the pleasure principle: there was a belief that whatever was desired could be fulfilled.

The next stage was called the tentative period (ages 11-17), which could be divided into four stages: interest, in which individuals clarified their likes and dislikes; the capacity stage of testing abilities against aspirations; the value stage at which perceptions of occupational style emerged; and the transition stage in mid-teens which was concerned with preparation for an occupational decision. The tentative stage was the most important one because interests, abilities and values were bases for vocational choices.

The final stage was the realistic stage (age 17 to adult), which again was divided, into exploration, crystallisation and specification. The substages were all concerned with the process of synthesising ideas about vocational options and coming to a decision. A decision was made based on a compromise between job requirements, educational opportunities and personal factors.

In 1972 Ginzberg revised his theoretical statement. His reformulated model stated (Ball, 1984, p.10): occupational choice is a lifelong process of decision-making in which the individual seeks to find the optimal fit between his career preparation and goals and the realities of the world of work.

Super is the acknowledged leading exponent of the developmental model. In 1951 Super and his associates began to do large-scale multiple-country experimental research on careers development. Based on this experimental research that was conducted over a 20-year period, Super put forth a comprehensive model of careers development. He supposed that careers development was characterised by a loosely defined matching

process between individuals and jobs. More importantly, the process of occupational choice, which was characterised by a series of life stages of careers development, was one of compromise and adjustment, and primarily concerned with implementing a self-concept.

Super delineated the following five careers stages (Tolbert, 1980). The growth stage (birth to 14) was characterised by identification with key figures in family and school and an increasing awareness of interests and abilities. It contained three substages: (1) fantasy (4-10) when needs are dominant; (2) interest (11-12); (3) capacity (13-14) when abilities are considered as well as job requirements.

The exploration stage (15-24) was characterised by an increasing exploration of self in relation to work. It contained three substages: (1) tentative (15-17) when tentative choices are made and tried out in fantasy, discussions, and work; (2) transition (18-21) when reality factors are given more attention as the individual enters work, training or further education; (3) trial (21-24) when an apparently suitable choice is tried out.

The establishment stage (25-44) was the period during which an individual began to feel established in a particular field and this could be separated into two substages: (1) trial (24-30) when job or jobs are likely to be tested for suitability; (2) stabilisation (31-44) when a pattern emerges and the individual attempts to secure his position in work.

The maintenance (44-64) stage: work position is consolidated.

The stage of decline (65+): retirement or reduction in work role.

Super's model of development, with Ginzberg's developmental model, combined certain developmental tasks with stages of increasingly mature vocational behaviour. The model of developmental stages became the

main basis for careers guidance in American careers guidance programmes, starting with careers awareness, progressing through careers exploration, careers planning, careers preparation and ending with careers entry and progression.

The developmental model aroused world-wide enthusiasm and support. Model and practice, whether in western states or in eastern countries, indicated an increasing shift in emphasis to a developmental approach to careers guidance (Drapela, 1979).

However, Herr (Herr, 1970) pinpointed some limitations of the developmental model. First, many assumptions were tentative and only partly research-based. Second, the research was based on data that came from middle-class white males.

Nevertheless, since the 1970s, the developmental model has had a strong influence on careers guidance in Britain. Vocational guidance was replaced by careers guidance in Britain (see Chapter 1). Since 1986 China has also adapted some aspects of the developmental model to develop careers guidance in some urban secondary schools. The rationale behind careers guidance was that it should be comprehensive and developmental (Jin Yiming et al., 1991). However, Super's stages of careers development have not been examined in the context of China and Great Britain.

5. Opportunity structure model

In the 1970s, when the developmental model was popular, the opportunity structure model, which was a reaction against the developmental model, appeared in Britain, notably from Roberts.

Roberts concentrated on entry into work, but, unlike Ginzberg and Super, he saw little point in discussing the self-concept, ambition or careers choices. Instead, while accepting that America and other societies may offer more scope for choice, he stressed the limitation on opportunities inherent in the structure of British society, particularly in respect of social class and education. He had two underlying tenets (Roberts, 1968): first, that potential workers can be differentiated and allocated to their various roles within society's stratified occupational system; and second, that they can be persuaded to accept their allocated roles.

The means to do this came from an interaction between the effects of social class differences and educational experiences, the family acting as an agent of socialisation and reflecting the values of their positions in society.

Roberts (1968) claimed that there were substantial inequalities in education and thus a reduction in the socio-economic opportunity ensued. Consequently, few moved far from their original position in the social hierarchy. Ambitions were adapted to fit the types of work available as a function of class and social inequalities. This structuralist view challenged the developmentalist approach. Roberts considered the latter unrealistic for the many who would never achieve their ambitions or develop a career as such, but would have to be content with an allocated role and minimal satisfaction.

Roberts (1977) argued that the developmental model was naive and unrealistic, based on concepts of 'choice' which were irrelevant to most people. Occupational destinations were substantially determined not by individual choices but by opportunity structures. People did not typically 'choose' occupations in any meaningful sense: they simple took what was available.

Therefore, any attempt to increase occupational and self awareness, as developmentalists would advocate, would be of marginal value and could create unrealistic aspirations. He did not deny that some scope exists, but stated that this was very limited and could be non-existent.

Roberts suggested that attention should be redirected from school towards young workers, particularly the casualties of the crisis of unemployment. Careers guidance should help resolve practical issues of life and employment. Careers guidance should therefore concentrate not on raising unrealistic expectations, but on helping people to adjust successfully within the opportunity structures open to them.

However, Daws (1977) listed a number of weaknesses in Roberts's model. First, he questioned whether it could be described as a model, as Roberts himself had suggested that it would not fit all situations, thus weakening its comprehensiveness. Second, Roberts did not take into account the rapidity of contemporary social and economic change, and with it the degree of social mobility. Third, Roberts denied the value of psychological models of occupational choice, without sufficient evidence. Roberts's original study in 1968 was based on a survey of 196 men aged 14 to 23 in a London Borough in 1965. This sample lacked some important information, not least data on women.

Roberts posed the important question as to whether people really have the freedom to choose jobs and whether there is scope for real careers development, or whether the stratified occupational systems, recruitment policies and the nature of education and family/social class decide people's occupations. If the opportunity structure model were completely valid, school careers guidance intervention would be almost unnecessary. In an attempt to explore this model, however, this study will question pupils of

different academic levels and from different socio-economic backgrounds on their experience and perception of careers choices and school careers guidance intervention. This issue will be discussed in Chapters 4 and 5.

6. Polytechnic education model in the 1950s in the Soviet Union

Nadezhda Krupskaya (1869-1939), a Soviet educator, proposed polytechnic education. She first used this phrase in 1918. According to Krupskaya, the aim of the polytechnic school was the preparation of a new generation of people who would be workers and masters of industry in the complete sense of the word. At a conference on industrial education in 1931 she explained her main ideas (Price, 1977, p. 187):

> Will the polytechnic education school give more theoretical knowledge than there has been up until now? No, not less, but more; but the knowledge itself will be qualitatively different from that which our old school, so-called "academic school", gave and which the modern bourgeois school gives.
>
> It will give a whole series of new and very important knowledge necessary to master Marxist-Leninist theory, to master technology, and become a master of life, citizen of a Soviet country, and a builder of socialism.
>
> However, this is not all: a polytechnic school must not only give knowledge, but teach how to apply it to life. Mastery through understanding, knowledge capable of being applied, and a disposition for change, these were to be the aims.

Although Krupskaya strongly advocated this model, polytechnic education was not broadly accepted until the 1950s. It was one of the

central points in the Soviet reforms in the 1950s. Polytechnic education was defined by the Soviet authorities as an education based on the fundamental principle of industrial production. It was quite distinct from vocational training, which dealt with a particular vocational skill.

The aim of polytechnic education was to make children familiar with the most important branches of production in industry and agriculture, imparting skills in the handling of tools and materials, and generally acquainting them with both theoretical knowledge and first-hand practical experience in the basic processes of production. Government policy required that the model and practice of work should be combined with the more familiar school subjects to form the basic general education of future Soviet citizens. Study and work alike must be familiar to them, whatever their future job might be (Grant, 1964, p. 38). In the Soviet Union polytechnic education became a term used to embrace the normal practical work associated with study of the natural sciences and engineering, the kind of labour training on farms or in factories (Hayhoe and Bastid, 1987).

Polytechnic education was introduced into China in the early 1950s and had been widely adopted by ordinary secondary schools in the middle of the 1950s. Polytechnic education had a broader base than vocational training. Its aim was to impart an understanding of the processes and principles of production and to teach the knowledge and skills basic to all forms of production rather than those of specific occupations (Chen, 1981, p. 37). For example, each school was allocated several engines for teaching purposes. If pupils understood the principle of one engine, they should then be able to understand the working of most machines in industry and agriculture (personal interview with Professor Jin Yiming on 8 April 1994). The aim was to change academic schools into labour schools (Dong Chencai et al., 1985). Pupils learned the general principles of industry and

agriculture and were encouraged to be skilled workers and peasants.

The practice of Polytechnic Education in China in the 1950s showed that it could not deliver systematic scientific knowledge and it reduced the academic quality of education. Polytechnic Education could train skilled workers, but not professional people (Zhou Yuliang, 1990).

7. Mao Zedong's re-education model

During the Cultural Revolution, from 1966 to 1976, graduates from secondary schools, colleges and universities followed Mao Zedong's appeal to go to the countryside. According to Mao's model, pupils trained in the old schools, colleges and universities should integrate with workers, peasants and soldiers and be re-educated by them. Mao believed that rural areas provided plenty of scope for developing people's talents to the full. According to Mao (Wheelwright and McFarlane, 1970, p. 239):

> It is very necessary for educated young people to go to the countryside to be re-educated by the poor and low-middle-class peasants. Cadres and other people in the cities should be persuaded to send their sons and daughters who have finished junior or senior secondary school, college or university to the countryside. Let us mobilise (Mao Zedong, 1968).

From 1966 to 1976 the distinction in China between academic and vocational/technical schools was criticised as a device for perpetuating existing social inequalities (Pepper, 1990). All vocational and technical schools were axed or ceased operation. Only ordinary secondary schools remained open. Universities and colleges were closed and entrance

examinations were abolished. Graduates from urban secondary schools followed Mao's appeal to go up to the hills and down to the villages where they settled down and founded their families. The Chinese Vocational Education Association was disbanded and most of its researchers were sent to farms to do manual work in order to receive political re-education and renew their world outlook. It was impossible for anyone to propose or introduce any other models or methods of careers guidance at this time.

The re-education model was the product of the Cultural Revolution in China, which served politics at that time. Young people had to obey Mao Zedong's call to go to countryside, where they were given political and ideological education, rather than being taught new skills. If young people refused to go to the countryside, their brothers or sisters would never be allowed to enter employment. If parents did not let their children go, they would be accused of being "anti-government". The term vocational guidance was criticised and banned. In fact, because the re-education policy was a compulsory one, it can hardly be called "guidance" model.

8. Combination model

Since 1990 careers guidance in China has used the combination model of careers guidance. This model postulates that careers guidance aims to help people find the best combination point between personal characteristics and the needs of the society (Jin Yiming et al., 1991, p. 60; Shanghai Educational Bureau, 1992a). The aims of the combination model are threefold. First, careers guidance ought to reveal and develop pupils' vocational psychological characteristics.

Second, careers guidance should help pupils gain occupational

information, and this information should cover both simple and complex occupations, as well as local and more diversified ones.

Third, careers guidance should put people in a better position to make realistic careers choices based on their academic achievements, their personal needs and those of the community. If this goal could be achieved, pupils would be more likely to choose occupations requiring different levels of skill, and to enter different kinds of vocational and technical schools. Also, vocational and technical schools would then be able to enrol enough qualified new pupils.

However, little research has been done on this model for two reasons. First, careers guidance in China is still in its early stages and the combination model is so far the only one that has been put forward in the most recent period; second, the model has been accepted by the State Education Commission of China, and it is not traditional for Chinese researchers and practitioners to criticise government documents.

But it is necessary to consider the following points concerning the combination model. (1) Some of the ideas in the combination model came from the 1986 survey (see introduction). For example, the 1986 survey showed that three quarters of pupils who reported in Shanghai chose the occupations of scientist, doctor and teacher. These choices were unrealistic and so careers guidance should help pupils choose careers that will be of use to the community (see introduction). It is doubtful whether the results of the 1986 survey should still be used in 1995. (2) The combination model accepts that careers guidance is a process, but it does not explore how young people's careers aims develop and change. Super's stages of careers development have not so far been examined in the context of China. (3) This model emphasises the needs of the community, but schools may not

yet be in a position to provide information on the occupations of the future. (4) It must also be considered whether young people's careers choices are based on personal characteristics and the needs of the community, or simply on personal values (such as salary), qualifications and job availability. These issues will be explored in Chapters 4, 5 and 6.

9. Discussion

Through describing and evaluating careers guidance models a series of questions has been raised. Is careers guidance only a matter of matching personal characteristics and occupational requirements, or should it be a process based on people's psychological development? Can Holland's personality type model be applied in the setting of China and Great Britain or not? Does personal careers development have distinct stages and can careers intervention facilitate and accelerate young people's careers development? Are young people's careers decisions influenced by sociological or psychological factors, and which factor is more important? Are occupational opportunities structured by school and educational attainment, or by home and family background? Can the 1986 survey in China still be the basis of a current careers guidance programme? Are young people's careers choices based on personal characteristics and the needs of the community? Case studies will be conducted in Shanghai and Edinburgh to explore these topics. In Scotland, a certain amount of research has been done on the careers considerations of young people, but little has yet been done in China.

In Scotland, from 1977 to 1981, Ryrie et al. (Ryrie, 1983) conducted a survey to explore young people's process of entry into work or tertiary education. The survey found that entry into particular jobs must be seen as a process

of interaction between earlier intentions and actual opportunity (mediated often by the family and the careers service), the relative importance of the two varying according to the labour market. However, this study did not consider Super's stages of careers development and Holland's personality type model. Moreover, because this survey was conducted at the end of the 1970s, it does not take account of some of the new careers guidance methods such as computer-assisted careers guidance.

The Scottish School Leavers Surveys have been conducted by the Centre for Educational Sociology (CES) at the University of Edinburgh in conjunction with the Scottish Education Department (SED) since 1981. The purpose of these surveys was to provide information on the views and experiences of school leavers to help improve education and related services. These surveys focus on the following topics: the third and fourth years of secondary schooling; the decision to stay or leave at 16; schooling after 16; and the transition to employment, unemployment and vocational training (CES, 1981; CES, 1986; CES, 1991; CES, 1992; Raffe, 1984). However, these studies are not intended to explore pupils' careers development and the function of careers guidance intervention in young people's careers decisions throughout the secondary school years.

Therefore, it is now an important priority to examine pupils' experience and perception of careers choices and careers guidance interventions in order to assess careers guidance in both China and Britain. This study will employ the method of case study to explore these topics in several schools in Shanghai and Edinburgh. Chapter 3 will describe the design, methodology and materials of the study.

CHAPTER 3

THE DESIGN, METHODOLOGY AND MATERIALS OF THE RESEARCH

Chapter 3: The Design, Methodology and Materials of the Research

1. Introduction

As mentioned before, the purpose of this study is to explore pupils' experience and perception of careers choices and careers guidance methods, and to evaluate careers guidance models and practice in the context of China and Great Britain. In order to achieve this aim, the method of research should meet several requirements. First, the research must be conducted in two countries. Second, the data collected from the two countries should be comparable. Third, the samples must be comprehensive and include both males and females, bright and less bright pupils, and pupils from high and low socio-economic classes.

Samples were chosen from secondary schools in Shanghai and Edinburgh as case studies. There were several reasons for selecting these two cities. First, Shanghai is the only city in China where secondary schools have been required since 1993 to implement careers guidance. Second, both Shanghai and Scotland have standard exams for secondary school pupils. Exam results limit a pupil's educational level choice. Third, school leavers in Shanghai have to undergo vocational training before they enter employment. They need careers guidance to choose the appropriate careers training. In Edinburgh, school leavers need careers guidance to choose occupations or vocational training. Fourth, although Edinburgh is small compared to Shanghai, it is a large city within Scotland and serves as its capital. Last, but not least, the present author was involved in careers guidance research and practice in Shanghai from 1986 to 1991. In 1991 he took up studies at Edinburgh University and got to know several young Scottish pupils,

careers officers and teachers in Edinburgh. All these factors facilitated accessing schools in Shanghai and Edinburgh.

2. Design of the research

It seemed that a questionnaire-type survey would be the most suitable method in this study for two reasons. First, a questionnaire not only affords wider geographic coverage, but it also reaches persons who are difficult to contact. This greater coverage makes for greater validity in the result through promoting the selection of a large and more representative sample. Second, a questionnaire allows greater uniformity in the way the questions are asked and thus ensures greater comparability. A questionnaire-type survey was therefore used as the main research method in this study.

However, a questionnaire-type survey also has certain disadvantages (Mouly, 1978, p. 190):

> First, the percentage of returned questionnaires is often low. Not only do nonreturns decrease the size of the sample on which it is based, but they introduce a bias, inasmuch as nonrespondents are likely to differ from respondents in fundamental ways.
>
> Second, if the respondent is uninterested in the topics under investigation, he/she will answer questions more or less at random. Third, there is the possibility of misinterpretation of the questions.

In view of the limitations of the questionnaire-type survey several measures were taken in this study. First, the survey questionnaires were administered in a classroom setting during school hours so that the

percentage of questionnaires returned would be high. Second, preliminary work (interviewing pupils, guidance teachers and careers officers) and a pilot study were conducted to see if respondents would be interested in answering the questions. Third, the present author gave respondents a standard set of instructions, dealt with any queries, and collected the questionnaires. Fourth, respondents were asked to complete questionnaires anonymously in order to elicit more candid replies.

Both closed and open questions are used in this questionnaire survey. Closed questions facilitate group comparisons, and serve to analyse the relationships between respondents' careers choices and other factors. Open questions give respondents the freedom to express their opinions on, for example, their experience of careers guidance.

Several other research methods were employed to supplement the questionnaires. These included historical research, unstructured interviews and observation.

Historical research on careers guidance should help to provide a clearer perspective of the present. For example, through historical studies, it is clear how American careers guidance models have influenced Chinese and British careers guidance. This influence raises the important question of whether American careers guidance models can work in the context of China and Britain (see Chapter 1). Historical research on careers guidance also helps to explore the relationship between pupils' careers choices and changes in society. The experience and lessons from history have been valuable in the search for improvements in careers guidance.

Unstructured interviews were conducted to help with the design of questionnaires and to help with the analysis of respondents' answers. For example, guidance teachers, careers officers, school principals and pupils were interviewed to gain a better understanding of educational background,

the status and problems of careers guidance and pupils' attitudes to careers choices and school careers guidance.

Observation was also a necessary method in this study. For example, careers libraries, careers counselling, careers days and other careers activities were observed in order to evaluate careers guidance methods and to understand better why respondents answered questions in the way they did.

3. Sample

The sample of pupils was chosen from seven secondary schools in the centre of Shanghai and Edinburgh. The questionnaire survey for pupils employed stratified sampling designs in order to make sampling more representative. Pupils' academic achievements were the main criteria for the choice of subjects. Three kinds of school were selected: those of a low, a middle and a high academic standard, both in Shanghai and Edinburgh.

In order to chart the pupils' process of careers development and careers choice this study selected subjects in S4, S5 and S6 in Edinburgh.[1] S4 was the final year for some pupils. At this age a pupil would be in junior 2 in Shanghai, and after junior 3, 50 per cent of pupils would enter vocational and technical schools. The other 50 per cent would enter senior secondary school for a further three years. Therefore, this study could not compare pupils of the same school year in view of the age difference. All subjects in both Shanghai and Edinburgh were 14+ and in secondary schools, that is sample pupils in juniors 2 and 3 and seniors 1, 2 and 3 in Shanghai, and pupils in S4, S5 and S6 in Edinburgh.[2]

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[1] S4 means the fourth year of secondary school in Scotland.
S5 means the fifth year of secondary school in Scotland.
S6 means the sixth year of secondary year in Scotland.

[2] Junior 2 means the second year of secondary school in China.

The sample of guidance teachers in Shanghai was chosen from six schools, including the same four schools as the pupils' survey, one school with low academic standard and one with mixed academic standard. In Edinburgh, careers officers, who carry out school careers guidance, were chosen as the sample.

The Shanghai sample

The participants in the Shanghai survey were 692 pupils (45.2 per cent boys and 54.8 per cent girls) in four schools.

The four selected schools included one junior secondary school and one senior secondary school with a low academic standard (School 1), one junior and senior secondary school with an average academic standard (School 2), and one junior and senior secondary school with a high academic standard (School 3). Tables 3.1, 3.2 and 3.3 below show the size of samples according to school, class and age, and gender.

Junior 3 means the third year of secondary school in China.

Senior 1 means the fourth year of secondary school in China.

Senior 2 means the fifth year of secondary school in China.

Senior 3 means the sixth year of secondary school in China.

Table 3.1. Sample size according to school in Shanghai

School	Number (N)	Percentage (%)
School 1 (low academic standard)	218	31.5
School 2 (mixed academic standard)	240	34.7
School 3 (high academic standard)	234	33.8
Total	692	100.0

Table 3.2. Sample size according to class and age in Shanghai

Class (Average age)	Number (N)	Percentage (%)
Junior 2 (14.3)	152	22.0
Junior 3 (15.3)	150	21.7
Senior 1 (16.2)	136	19.7
Senior 2 (17.2)	130	18.8
Senior 3 (18.3)	124	17.9
Total	692	100.0

Table 3.3. Sample size according to gender in Shanghai

Sex	Number (N)	Percentage (%)
Male	313	45.2
Female	379	54.8
Total	692	100.0

School 1 has a low academic standard. About 25 per cent of school leavers entered senior secondary schools in 1993, and about 15 per cent of senior secondary school leavers entered colleges and universities in 1993.[3]

School 2 has an average academic standard. About 48 per cent of junior secondary school leavers entered senior secondary schools, and about 42 per cent of senior secondary school leavers entered universities and colleges in 1993.[4]

School 3, a key-point secondary school, was chosen as an example of a school with a high academic standard.[5] About 97 per cent of junior secondary school leavers entered senior secondary schools and about 95 per cent of senior secondary school leavers entered universities or colleges in 1993.[6]

Twenty-five guidance teachers from different grades (Juniors 2 to 3 and Seniors 1 to 3) in six schools were selected.

The Edinburgh sample

The participants in the Edinburgh survey were 375 pupils (51.2 per cent boys and 48.3 per cent girls) in three selected secondary schools.

The three selected schools included one with a low academic standard (School A), one with a mixed academic standard (School B) and one with a high academic standard (School C). Tables 3.4, 3.5 and 3.6 below show the size of samples according to school, class and age, and gender.

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[3] Personal interview with a director of teaching at School 1, on 8 April 1994.

[4] Personal interview with a director of teaching at School 2, on 6 April 1994.

[5] Key-point schools have the privilege to enrol bright new students. This kind of school has more qualified teachers and better teaching facilities than other schools. The majority of pupils at key-point schools enter universities or colleges.

[6] Personal interview with a director of School 3, on 6 April 1994.

Table 3.4. Sample size according to school in Edinburgh

School	Number (N)	Percentage (%)
School A (low academic standard)	60	16.0
School B (mixed academic standard)	152	40.5
School C (high academic standard)	163	43.5
Total	375	100.0

Table 3.5. Sample size according to class and age in Edinburgh

Class (Average age)	Number (N)	Percentage (%)
S4 (14.8)	152	40.5
S5 (15.9)	131	34.9
S6 (16.9)	92	24.5
Total	375	100.0

Table 3.6. Sample size according to gender in Edinburgh

Sex	Number (N)	Percentage (%)
Male	193	51.2
Female	182	48.3
Missing	2	0.5
Total	375	100.0

School A, a small secondary school, was selected as a school with a low academic standard. Very few school leavers entered university.[7] Most pupils left school at the age of 16. Only 19 per cent of the pupils stayed on in S5 after the minimum leaving age in 1992 (Scottish Office, 1993).

School B, a middle-sized school, represented schools with a mixed academic standard. Forty five per cent of the pupils stayed on in S5 after the minimum leaving age in 1992 (Scottish Office, 1993). The level of pupils' academic achievements varied from high to low. About 30 per cent of school leavers entered universities or colleges.[8]

School C was selected as an example of a school with a high academic standard. This is a large private secondary school. About 86 per cent of school leavers entered universities and about 10 per cent entered colleges in 1992.[9]

Thirty-three careers officers in Edinburgh were chosen as a sample.

4. Materials

(1) The design of questionnaires

The purpose of this study was to examine young people's experiences and perceptions of careers choices and careers interventions. Those surveyed included secondary school pupils and careers guidance providers. Four questionnaires were designed by the present author. The final questionnaires can be seen in appendices 1, 2, 3 and 4.

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[7] Personal interview with a careers officer at School A, on 19 March 1993.

[8] Personal interview with a guidance teacher at School B, on 26 March 1993.

[9] Personal interview with a careers master at School C, on 19 March 1993.

(1) Questionnaire on careers awareness for Shanghai secondary school pupils (QSP)[10]

(2) Questionnaire on careers awareness for Edinburgh secondary school pupils (QEP)[11]

(3) Questionnaire for Shanghai school guidance teachers (QST)[12]

(4) Questionnaire for Edinburgh careers officers (QEO)[13]

The content of the questionnaires for pupils can be divided into two main parts: examining models (part 1) and examining methods (part 2).

Part 1: Questions aiming to examine pupils' experiences and perceptions of careers choices

(1) Pupils' criteria for choosing a career.

(2) Pupils' top ten jobs in each secondary school year.

(3) People from whom pupils get help in making careers decisions.

(4) Analysis of variables that influence pupils' higher education expectations and job level and type choices.

(5) The changing process of pupils' career aims during the secondary school years.

(6) The changing value of career aims during the secondary school years.

(7) Reasons why pupils change their occupational aims during their secondary school years.

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[10] QSP - Questionnaire for Shanghai pupils.

[11] QEP - Questionnaire for Edinburgh pupils.

[12] QST - Questionnaire for Shanghai guidance teachers.

[13] QEO - Questionnaire for Edinburgh careers officers.

(8) Pupils' comments on school careers guidance.

Part 2: Questions aiming to examine pupils' experiences and perceptions of careers guidance methods

(1) The kinds of help required by pupils from careers guidance.

(2) Evaluating methods of school careers guidance.

(3) Occupations considered by pupils.

(4) Pupils' needs for school careers guidance.

(5) Pupils' opinions of school careers guidance.

The contents of the questionnaire survey given to careers officers in Edinburgh and guidance teachers in Shanghai were as follows:

(1) The requirements of careers guidance providers.

(2) Careers guidance providers' assessment of careers guidance models.

(3) Careers guidance providers' opinions on the major problems of school careers guidance.

(4) Careers guidance providers' opinions on how to improve careers guidance.

(2) The procedures for developing the questionnaires

The questionnaire, used in Shanghai and Edinburgh, was developed by the present author, using the following procedures:

(a) Preliminary work

A series of exploratory interviews was carried out in Shanghai from 1987 to 1991 by the present author. Nine secondary school principals, 87 pupils and 48 parents in Shanghai were interviewed in 1991. Questions on pupils' careers criteria, careers needs and careers guidance activities were based on these interviews.

(b) Literature review

Beijing Library, Shanghai Library, Beijing Normal University Library, East China Normal University Library, Chinese Vocational Education Association Library, Edinburgh Main Library, Moray House Institute Library, Education Department Library of the Scottish Office and the National Library of Scotland were used to consult a wide range of literature on careers guidance.

(c) Interviewing

In Edinburgh three lecturers in careers guidance in the Europe Careers Guidance Group at Napier University, four careers officers, one careers master, three guidance teachers, two private school pupils and three state secondary school pupils were interviewed by the present author to examine the drafts of two questionnaires used in Edinburgh.

In Shanghai four secondary school principals, four guidance teachers and eight pupils were interviewed by the author's previous colleague, Shao Eiling, associate professor of Vocational and Technical Education at the East China Normal University, to examine the two questionnaires used in Shanghai.

(e) Discussion

The present author discussed the questionnaires with his three supervisors. At a result, the topic of pupils' academic achievements was added to the pupils' questionnaires in order to examine how pupils' academic achievements influence their careers choices and higher education expectations.

(3) Pilot study

One of the most important criteria for a questionnaire is that the topic must be of sufficient significance to motivate subjects to respond. It is sometimes worth the effort to do a pilot study to determine the receptivity of potential respondents (Gay, 1981, p. 166). It is also very important to examine through a pilot study whether the content of a questionnaire will elicit enough information to serve the aims of the study.

In Shanghai ten pupils in a Junior and Senior Secondary School were selected as samples in this pilot study. One boy and one girl in each grade, including junior grade two, junior grade three, senior grade one, senior grade two and senior grade three, were surveyed by Shao Eiling, using the draft questionnaire, *Questionnaire on Careers Awareness for Shanghai Secondary School Pupils.*

Four guidance teachers in a Junior and Senior Secondary School were surveyed by Shao Eiling, using the draft questionnaire, *Questionnaire for Shanghai School Guidance Teachers.*

In Edinburgh nine pupils in a public school and two pupils in a private school were surveyed by the present author, using the draft questionnaire, *Questionnaire on Careers Awareness for Edinburgh Secondary School Pupils.*

Four careers officers in Edinburgh were surveyed by the present author, using the questionnaire, *Questionnaire for Edinburgh Careers Officers.*

The following changes were made to the questionnaires as a result of the pilot studies:

(1) QSP and QEP questionnaire

When questioned about the criteria for their careers choice two Edinburgh pupils in the pilot study thought 'personal qualifications' was an important factor in their careers choice. For this reason the item *My Qualifications* was added in QEP 20 and QSP 24.

(2) All pupils in the pilot studies for QSP and QEP were happy with the questionnaires. They thought it was interesting to get the chance to talk about their personal careers choices although it could not help them make a choice.

(3) QST and QEO questionnaires

No changes were made to these questionnaires after the pilot study because no subjects in the pilot studies made any comment.

(4) Main study

The main survey in Shanghai was conducted by the present author from 22 March to 19 April 1994.

The survey schedule was as follows: 1 April for pupils of juniors 2 and 3, and 9 April for pupils of seniors 1, 2 and 3 at School 1 (low academic standard); 30 March for pupils of juniors 2 and 3, and 7 April for pupils of seniors 1, 2 and 3 at School 2 (mixed academic standard); 28 March for pupils of juniors 2 and 3, and 15 April for pupils of seniors 1, 2 and 3 at School 3 (high academic standard). The time allowed for the survey in each class was

about 45 minutes. The percentage of returned questionnaires was 100 per cent. The questionnaires for guidance teachers were distributed to 25 selected guidance teachers on 28 March and 24 returned questionnaires were received before 9 April 1994.

The main survey in Edinburgh started in June 1993 and ended in September 1993. All the pupils in S4, S5 and S6 in the three selected schools were chosen as samples. They had all just finished the previous year's studies and embarked on the next.

The samples at both School A (low academic standard) and School B (mixed academic standard) were surveyed in a 45-minute class on "Social and Personal Development" in June 1993 (15 June for S4 pupils and 18 June for S5 and S6 pupils at School A (low academic standard); 17 June for S4, 22 June for S5 and 24 June for S6 at School B (mixed academic standard). All the pupils of those two schools who attended the class on "Social and Personal Development" on the day of the survey were involved in this survey. In this survey 5.9 per cent of pupils were absent from School A (low academic standard) and 2.1 per cent of pupils from School B (mixed academic standard).

The pupils of S4 and S5 at School C (high academic standard) were surveyed in a 45-minutes class on "Careers Education" on 21 June 1993. Because the pupils in S6 at School C had exams and were due to travel abroad later in June and July, the survey of S6 pupils was postponed until 15 September 1993. 1 per cent of pupils were absent in this survey from School C (high academic standard).

The questionnaires were completed anonymously and were administered in a classroom setting during school hours by the author and the school guidance teacher/careers officer/careers master, who read a standard set of

instructions, dealt with any queries, and collected the completed questionnaires. The percentage of returned questionnaires was 100 per cent.

Before the pupils filled in the questionnaires, the author took ten minutes to explain each question and the methods of answering them. Pupils were then allowed to ask questions about anything that was unclear.

The questionnaires for careers officers in Edinburgh were distributed to 33 careers officers by Mr Paul Wheeler, an assistant regional careers officer at the Careers Service Headquarters in Lothian Region on 12 June and 24 returned questionnaires (73 per cent) were received before 21 September.

However, not all of the data from the questionnaires were used in this study because some were not comparable or not reliable. For example, Shanghai pupils were asked about their family's living situation, in the sense of how many generations were living together, their average living area and their family's average income. The data from the first two questions were not useful for comparison with Edinburgh, where family living situations and areas are not considered so important. The data on family income were also disregarded as many schoolchildren have no conception of a family income and may therefore have provided unreliable answers.

5. Statistical considerations

The Statistical Package for the Social Sciences (SPSS) is a statistical package for social scientists in Britain, and it is very easy to access in the computer mainframe at Edinburgh University.

Frequency, mean and standard deviation

Frequency is a percentage form of presenting data.

In this study, the mean (M) and standard deviation (SD) were used to examine the pupils' criteria for careers choice. The mean described the ranking of the different criteria for careers choice, while the standard deviation described individual differences between the pupils in their criteria for careers choice.

Chi-square

In this study, the chi-square test was performed to examine the relationships between the pupils' educational expectations, job level and type choices and their influencing factors with a significance of $p < .01$ when the data were in the form of frequencies that fell into discrete categories and were at the nominal level of measurement.

Spearman correlation

In this study the Spearman test was used to examine the relationships between the pupils' educational expectations, job level and type choices and their influencing factors with a significance of $p < .01$ when the data were ranked in order.

Multiple regression

In this study it was desirable to determine the correlation between pupils' higher education expectations, job level and type choices and many factors (gender, academic achievements, school type attendance, family background), and to measure the degree of relationships between various combinations of several variables. Multiple regression was employed to serve this purpose.

6. Limitations

There were several limitations in this study. First, most of the S5 pupils in School A (low academic standard) had already left school before the survey. Because this school had a very low academic standard, the majority of pupils did not stay on for S5 and S6. Some pupils stayed on for S5 because they had not reached their 16th birthday. The survey was conducted in June and only a few S6 pupils were still at this school. So the sample of S5 and S6 pupils in this school was very small.

Second, there is an imbalance between the Shanghai and the Edinburgh samples. In Shanghai the sample was 692 pupils, but in Edinburgh it was only 375. The pupils were within an age range of 14.3 to 18.3 years in Shanghai, but only between 14.8 and 16.9 years in Edinburgh. These differences are due to the different class sizes and the different education systems. In Shanghai there are about 50 pupils in each class, whereas in Edinburgh there are only about 33 in each. All subjects in both Shanghai and Edinburgh were 14+ and in secondary school, that is sample pupils in S4 to S6 (three grades) in Edinburgh and in Junior 2 to Senior 3 (five grades) in Shanghai. S4 was the final year for some pupils in Edinburgh, pupils of this age in Shanghai would be in Junior 2. After S4 in Edinburgh some pupils would study for a further two years to complete their secondary education, but many pupils after Junior 2 in Shanghai would study for four more years to finish their secondary education. For these reasons the samples in Shanghai were larger than those in Edinburgh and therefore not wholly comparable.

Third, as the sample was taken only from large cities, the results of the study may not be applicable in other cities or rural areas. For example, young people's careers considerations in rural areas in China would be totally different from those in Shanghai. Some of them might have no freedom to

choose their occupations at all. All they could do would be to follow their parents to work in the countryside.

Fourth, young people in Shanghai had more occupational choices than those in Edinburgh. In Shanghai all school leavers could get skilled jobs or high level jobs because school leavers who failed to enter colleges or universities could accept vocational training and then be awarded a Shanghai vocational qualification. All unskilled or physically-demanding jobs (such as construction worker, childminder, cleaner) in Shanghai, which are not popular amongst the Shanghainese, would be offered to young people from remote rural areas. Such a situation would be unlikely in Edinburgh because of unemployment. For such reasons some of the results may not be directly comparable.

CHAPTER 4

AN ANALYSIS OF PUPILS' EXPERIENCE AND PERCEPTION OF CAREERS CHOICES IN SHANGHAI

Chapter 4: An Analysis of Pupils' Experience and Perception of Careers Choices in Shanghai

1. Introduction

Chapter 3 described and evaluated a number of the different careers guidance models. This chapter will explore pupils' experience and perception of careers choices in Shanghai and further examine the five main careers guidance models: the matching model, the personality type model, the developmental model, the opportunity structure model and the combination model, in the context of Shanghai. Topics to be discussed include the criteria for choosing a career, occupational preferences, the factors that influence pupils' higher education expectations and careers choices, and the change in occupational aspirations over time and the reasons behind these.

2. Pupils' criteria for choosing a career

According to preliminary work and a pilot study described in Chapter 3 it was found that pupils' careers choices are influenced by ten criteria: personal ability, personal interests, salary, status/prestige, working conditions, chance to advance (promotion prospects), secure and stable employment, qualifications, job opportunities available and the benefit to society.

The pupils were asked to rank these criteria from the most important (10) to the least important (1). Table 4 below shows the average ranking results from 692 pupils.

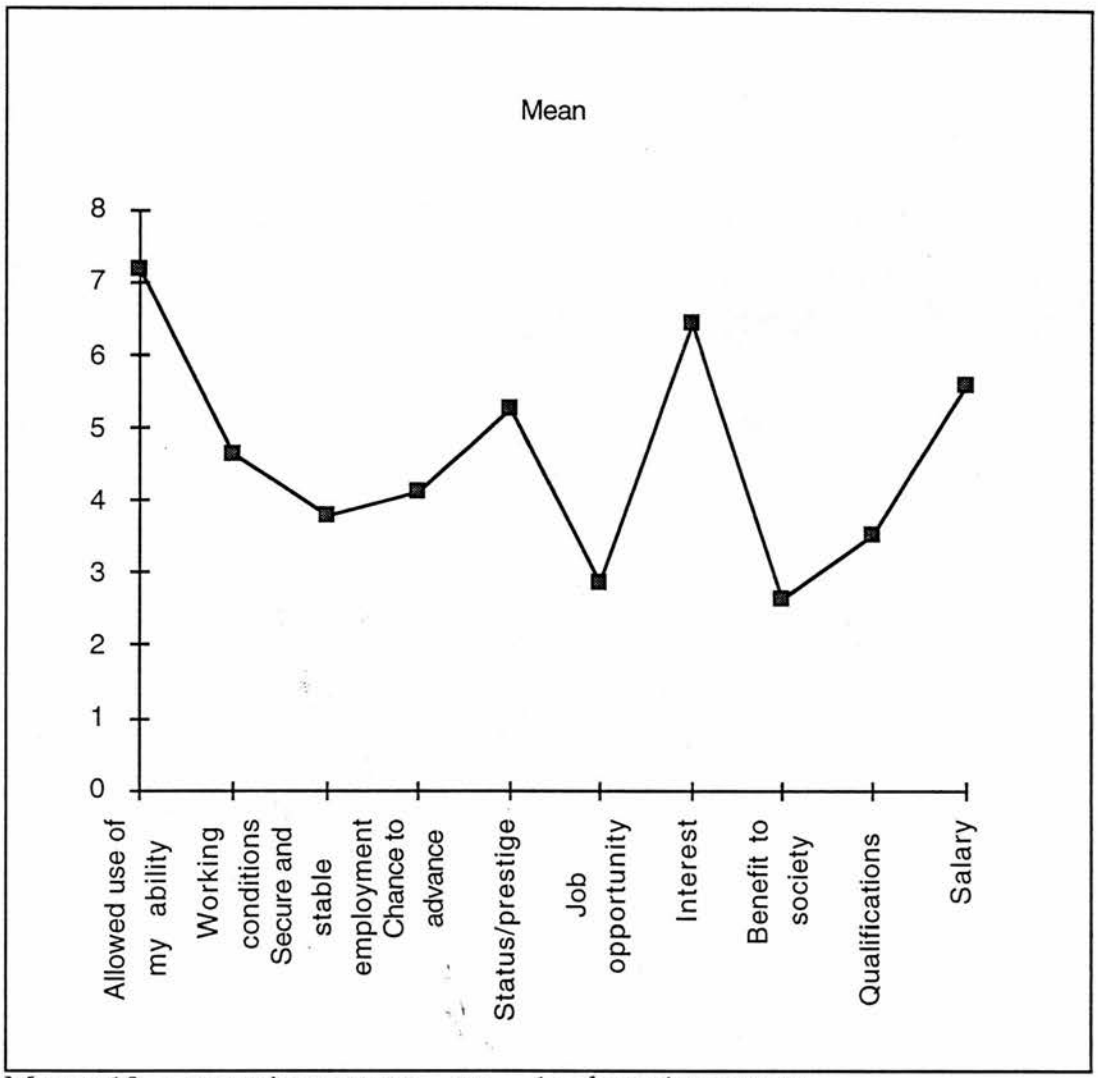
Table 4.1. The mean, standard deviation and ranking of the criteria for choosing a career (N=692)

Criteria	Mean	SD	Ranking
Allowed use of my ability	7.17	2.1368	1
Working conditions	4.65	2.3002	5
Secure and stable employment	3.77	2.4925	7
Chance to advance	4.12	2.4752	6
Status/prestige	5.27	2.4116	4
Job opportunity	2.86	2.2661	9
Interest	6.43	2.4799	2
Benefit to society	2.65	2.6040	10
Qualifications	3.52	2.9582	8
Salary	5.61	2.7298	3

Mean: 10 = most important to 1 = least important
Ranking: 1 = most important to 10 = least important

In order to clarify the table above, the information has been charted in Figure 4.1.

Figure 4.1. The mean of the criteria for choosing a career (N=692)



Mean: 10 = most important to 1 = least important

Table 4.1 and Figure 4.1 show that pupils regarded personal values (personal ability and interests) as the most important criteria in their careers choices. They ranked economic values (salary) and material values (status/prestige, work conditions and the chance to advance) as the second most important, secure and stable employment as not very important, and job possibility (personal qualifications and job opportunity) as not important. Benefit to society, influenced presumably by socialist ideology, was viewed as the least important.

Table 4.1 also shows that pupils' stated criteria for choosing a career were highly individual (standard deviation of each item was higher than 2) and varied considerably. This means that pupils differ from one to another in their criteria for careers choices.

It is clear from the results that pupils think first about getting a job in which they can use their abilities and interests, and then they consider what the job can offer them, such as salary, status/prestige, working conditions, and the chance to advance. Job availability appears to have little impact on their careers choices, and the benefit of the job to society is regarded as unimportant.

It may be suggested that pupils' criteria for choosing a career reflect local political, economic and employment policies. From the 1950s to the 1970s young people in China were not allowed to consider their own interests and abilities and had to obey the government's employment strategy. In fact, they had no freedom to choose their jobs. All workers earned a similar salary [normally 36 yuan (about £3) a month]. "Long live the 36 yuan a month salary" was a popular saying among Chinese workers in the 1970s. Personal values, such as interests and abilities, were criticised as "individualism". People had no chance to think about personal interests, abilities or salary when they were allocated a job. Now, in the 1990s young people in cities have a certain degree of freedom to choose their occupations. Because of high competition in business, jobs require employees with specific interests and abilities. Different jobs offer very different salaries. Some people are millionaires, others are low salary workers. Statistics showed that the top one per cent of urban families had 100,000 yuan (£7300) annual income (no income tax in China), while the bottom four percent earned less than 5,000 yuan (£370). The top one per cent also had an average of 280,000 (£20,000) in combined savings, securities, and cash (*China News Digest*, 11 July 1995). Salaries depend not only on personal interests and

abilities, but also on occupations and work units. Under such a situation young people choose a career to suit their abilities and interests, and for the rewards that the job offers. In addition, from 1949 to 1976 Mao Zedong stressed the importance of the working class. Factory workers were called "China's masters". The harder the workers' jobs were, the higher their social status. Manual workers' children were proud of their family background. Since the 1980s with Deng Xiaoping's policy of "respecting knowledge, respecting sciences and respecting talented people" the social status of white-collar workers has been upgraded to make it higher than that of the working class. White-collar workers have better working conditions and more chance to advance than manual workers. Therefore young people regard job status, working conditions and the chance to advance as the second most important factor when choosing a career.

Pupils ranked secure and stable employment as not very important. This may relate to the employment situation in Shanghai. In China, the unemployment rate is 2.9 per cent, but school leavers with a Shanghai identity certificate can get employment because most jobs in Shanghai are only for Shanghai dwellers.[1] Since 1986 with the reform of the job assignment system, the "iron rice-bowl" system has gradually been replaced by a contract system. The majority of new jobs for school leavers in Shanghai are contract jobs, which normally last for five years. It seems that pupils in Shanghai have not realised the problem of unemployment.

Pupils ranked qualifications and job opportunity as unimportant. This may be due to the specific situation in China. At present, job rewards (such as salary) are not related to qualifications. Some self-employed people are the richest in Shanghai, but they do not need high level educational certificates. With the upturn in the economy, the labour market in China is changing

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[1] Personal interview with Shao Eiling, associate professor of Vocational and Technical Education at the East China Normal University, on 11 April 1994.

rapidly. In Shanghai many existing companies change their products and new companies are set up each year based on the needs of the market, producing a lot of new jobs. It is therefore very difficult for school pupils to predict future job opportunities.

Finally, 'benefit to society' was ranked in the survey as the least important factor. From 1949 to the present day, benefit to society in careers considerations has traditionally played an important part in school political and ideological education. However, the reforms of the economy and the employment system require people to compete for employment using their abilities and talents. This means that there is little reason for young people to think about benefit to society when making careers choices. There is moreover another sense in which the phrase "benefit to society" is meaningless, because all jobs are a benefit to society.

3. Pupils' top ten jobs in each secondary school year

Pupils were asked to write down their preferred jobs at different educational stages from Primary 6 to Senior 3. The results are presented in Table 4.2 below.

Table 4.2. Pupils' top ten jobs in each school year (in percentages)

	P6	J1	J2	J3	S1	S2	S3
1	22.9	11.9	7.8	5.9	4.6	2.8	
2	22.3	17.4	13.3	9.4	9.3	8.7	7.4
3	8.2	11.3	7.7	4.1	10.8	9.1	4.9
4	7.7	9.2	8.4	6.7	5.1	4.7	2.5
5	6.4	4.5	3.2				
6	3.2	5.4	9.8	9.8	10.3	10.7	8.2
7	3.0	2.5					
8	1.9	4.6	7.1	10.2	11.8	17.4	26.2
9	1.6						
10	1.6		2.9				
11		3.0		4.1	4.9	4.3	9.0
12		3.5	7.2	11.1	9.3	7.9	11.5
13			3.2	4.8	3.3	3.2	2.5
14				4.4	5.1	3.6	6.6
15							2.5

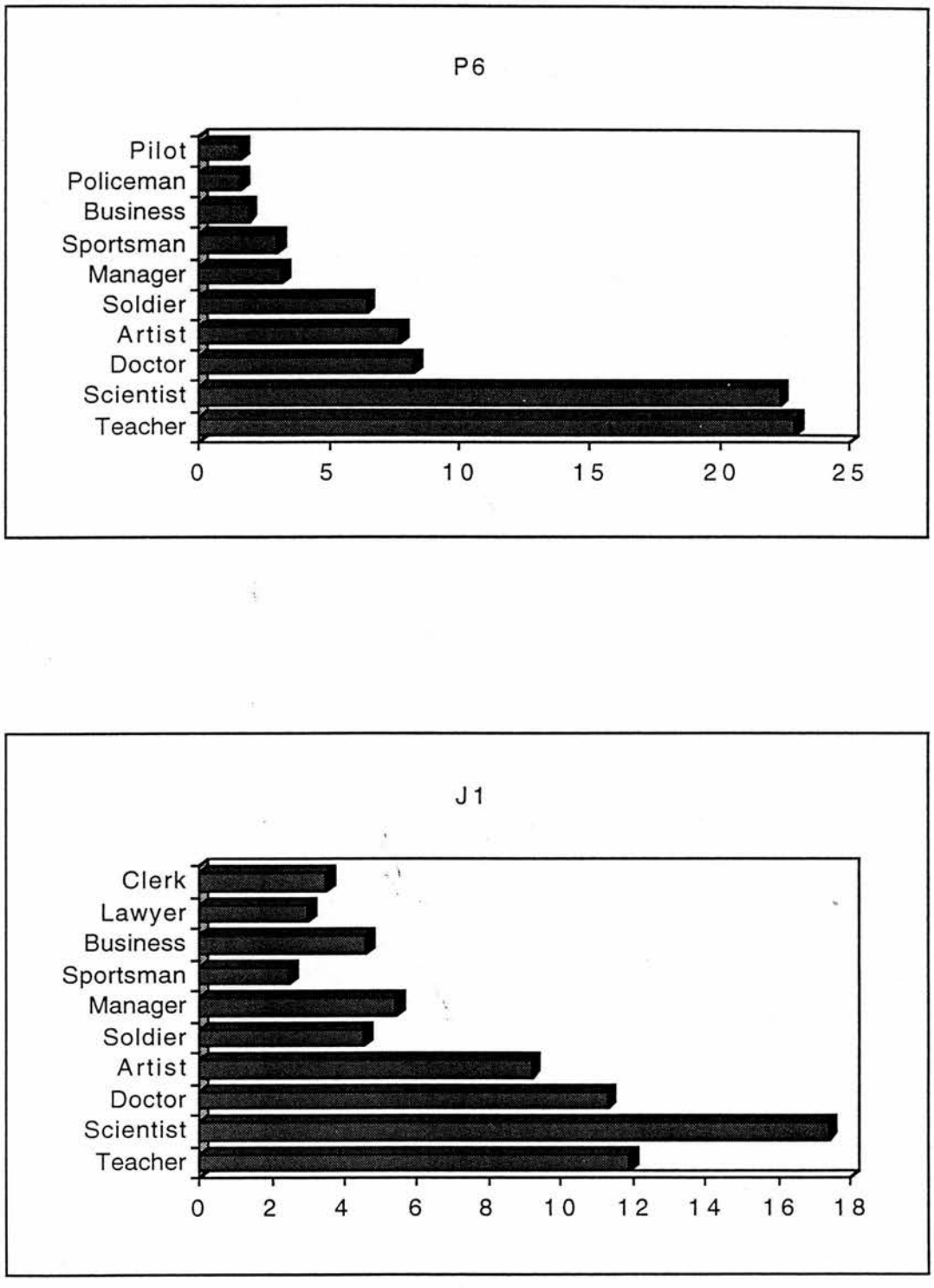
Notes

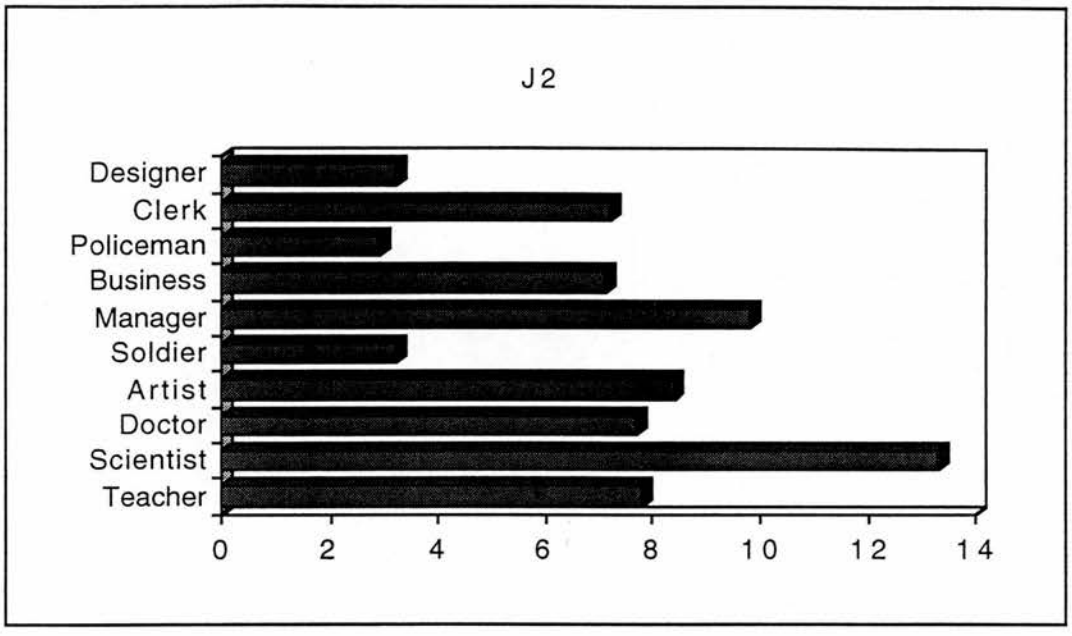
P6 - Primary 6
J1 - Junior 1
J2 - Junior 2
J3 - Junior 3
S1 - Senior 1
S2 - Senior 2
S3 - Senior 3

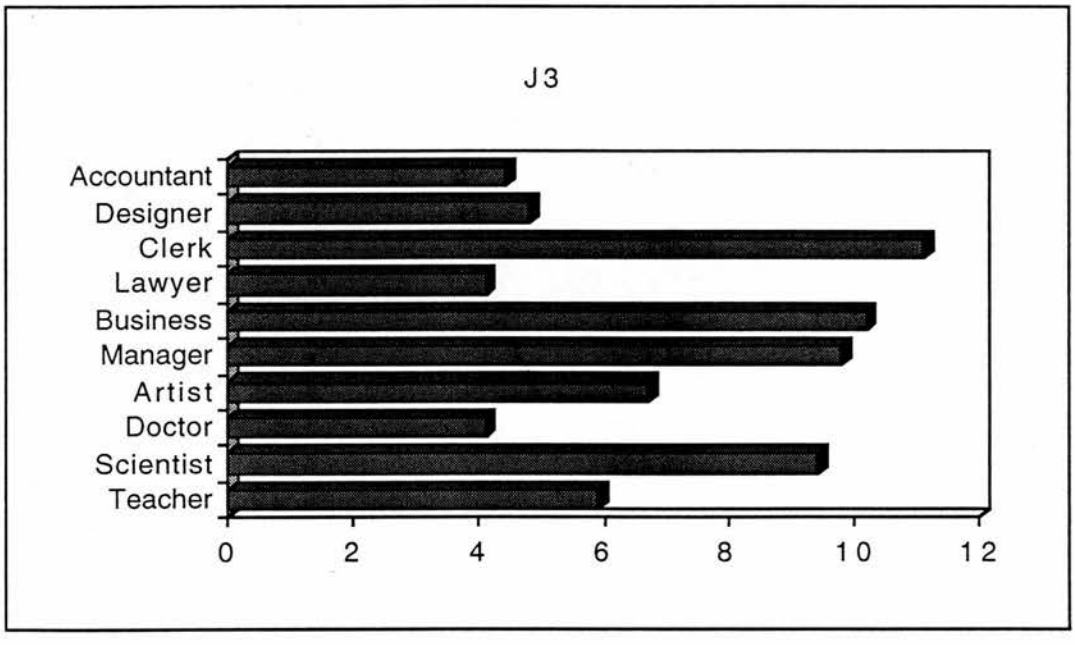
1. Teacher
2. Scientist
3. Doctor
4. Artist
5. Soldier
6. Manager
7. Sportsman/sportswoman
8. Businessman/businesswoman
9. Policeman/ policewoman
10 - Pilot
11 - Lawyer
12. Clerk
13 - Designer
14 - Accountant
15 - Politician

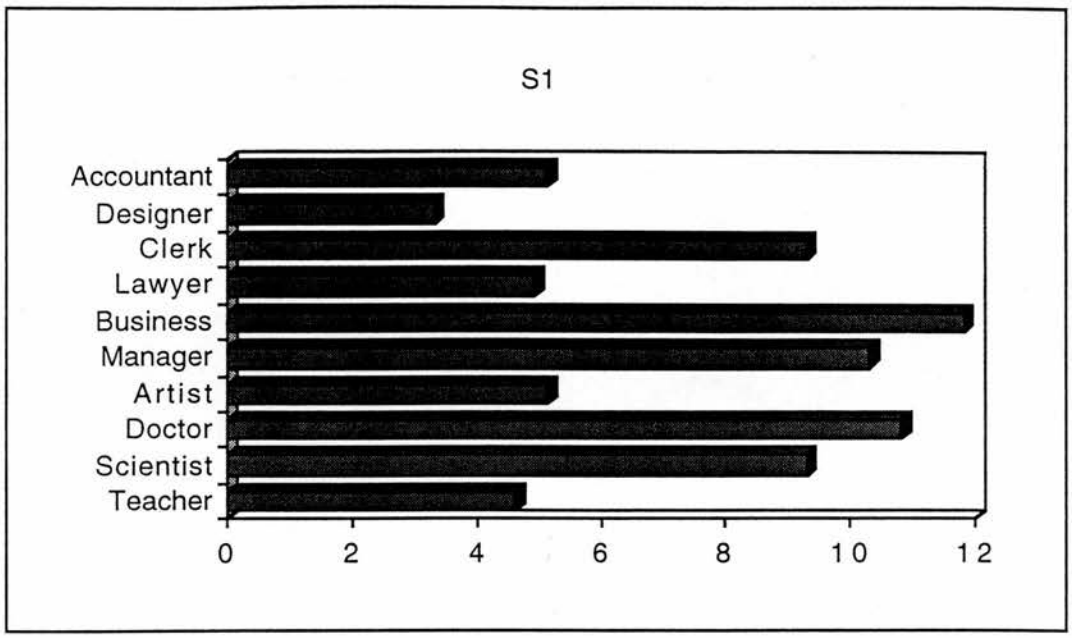
In order to clarify Table 4.2 the information has been charted in Figure 4.2.

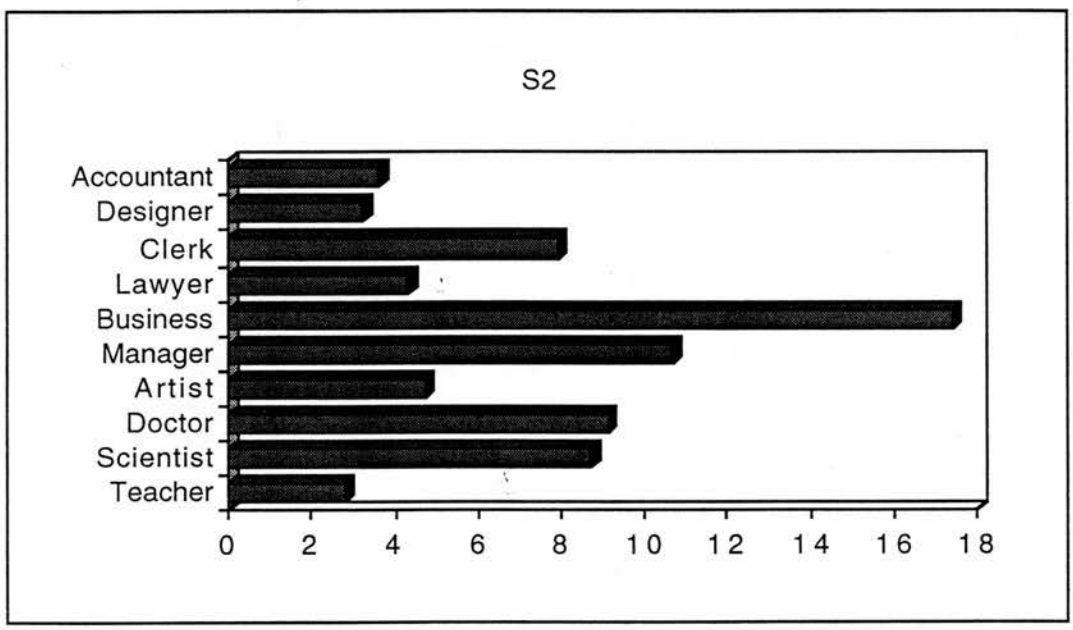
Figure 4.2. Pupils' top ten jobs in each secondary school year (in percentages)

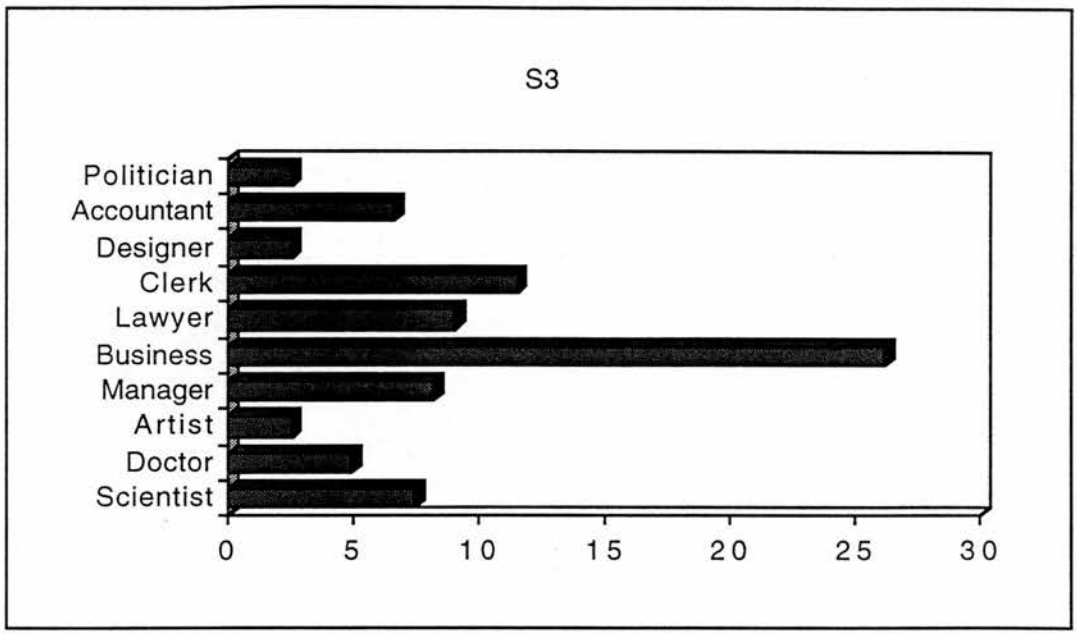



J2
Designer
Clerk
Policeman
Business
Manager
Soldier
Artist
Doctor
Scientist
Teacher
0
2
4
6
8
10
12
14


J3
Accountant
Designer
Clerk
Lawyer
Business
Manager
Artist
Doctor
Scientist
Teacher
0
2
4
6
8
10
12


S1
Accountant
Designer
Clerk
Lawyer
Business
Manager
Artist
Doctor
Scientist
Teacher
0
2
4
6
8
10
12


S2
Accountant
Designer
Clerk
Lawyer
Business
Manager
Artist
Doctor
Scientist
Teacher
0
2
4
6
8
10
12
14
16
18



Note:
Business: Businessman/businesswoman

Figure 4.2 shows that five jobs - scientist, doctor, artist, manager and businessman/businesswoman - were listed among the top ten in each secondary school year.

Another ten jobs were in some school years listed among the top ten: teacher, soldier, sportsman/sportswoman, policeman/policewoman, pilot, lawyer, clerk, designer, accountant and politician.

Figure 4.2 reveals that as pupils advance at school, fewer want to be teachers (22.9 per cent in Primary 6 and not listed at all in the top 10 in Senior 3) or scientists (22.3 per cent in Primary 6 and 7.4 per cent in Senior 3), while more would like to be businessmen/businesswomen (1.9 per cent in Primary 6 and 26.2 per cent in Senior 3) and clerks (not listed in the top 10 in Primary 6 and 11.5 per cent in Senior 3).

Manager and doctor are always attractive jobs for each year's pupils.

Figure 4.2 also shows that as pupils advance at school fewer want to be soldiers, sportsmen/sportswomen, policemen/policewomen, pilots and artists, while more want to be lawyers, clerks, designers and accountants. Interestingly, 2.5 per cent of pupils want to be politicians in Senior 3.

Table 4.3 (see Appendix 6) displays the boys' and girls' top ten jobs in each school year. Some preferred jobs are the same in the top ten for both boys and girls: scientist, teacher, soldier, doctor, artist, manager, sportsman/sportswoman, accountant, clerk, businessman/businesswoman and lawyer. There are, however, some differences of job preference between boys and girls. More boys want to be scientists, soldiers, businessmen and managers, while more girls want to be teachers, doctors and clerks. Also, some boys want to be pilots, policemen, technicians and politicians, while some girls want to be designers, tour guides and journalists.

Table 4.4 (see Appendix 6) reveals the pupils' top ten jobs in three schools with different academic levels. In the School 1 (low academic standard) some pupils chose the job of shop assistant while the pupils in other two schools did not choose this partly skilled level job. There is no other distinct difference between the top ten jobs in three kinds of schools, which can be seen from Table 4.4. This topic will be explored in the later part of this chapter.

With the reforms and open-door policies, China has developed several types of work enterprise, which provide employees with different benefits. People's job expectations include the choosing of work enterprises. At present there are five main work enterprises: state enterprise, collective enterprise, private enterprise, joint-venture enterprise and self-employed. The pupils were asked which type of work enterprise they would like to choose. The results are displayed in Figure 4.3 below (the detailed data can be seen in Table 4.5 in Appendix 6).

Figure 4.3. Pupils' preferred work enterprises

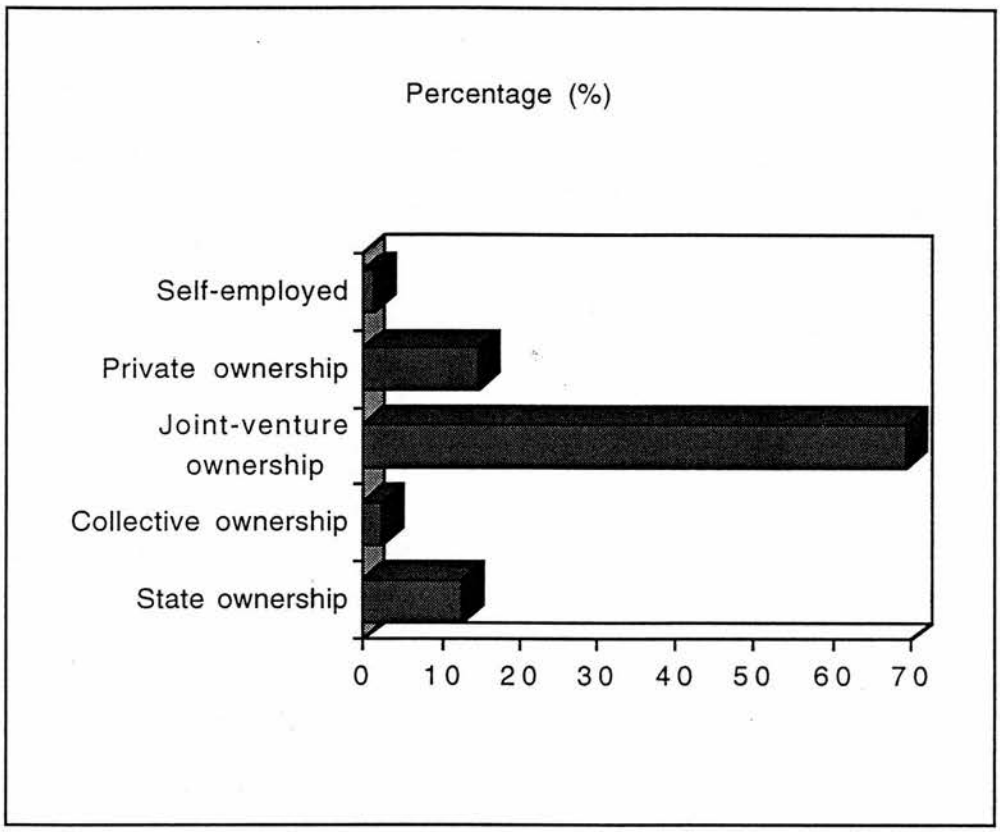


Figure 4.3 shows that the majority of pupils would like to work in joint-ventures (69.4 per cent) and private enterprises (14.5 per cent). Joint-ventures mean a joint ownership between a company in mainland China and another one outside mainland China, such as the China-Scotland Whisky Factory and the China-Hewlett-Packard Computer Company. At present there are more than 2000 joint-venture companies in Shanghai. The Chinese government offers this type of enterprise many benefits in order to attract investment from overseas. For example, only joint-venture companies can enjoy the privilege of three tax free years after their products are first put on the market. If joint-venture companies do not show profits

after three years, they can apply to continue to operate tax free. Because of the cheap labour in China, this kind of enterprise often makes substantial profits and provides employees with higher salaries than those who work for state or collective enterprises. University graduates who work for joint-ventures can gain much higher income than those who work for universities (Li and Bray, 1992). Joint-ventures, like private companies, have many openings for businessmen/businesswomen and clerks.

It is possible to argue that these results suggest that young people's occupational preferences are influenced by the political, economic and local labour market reforms. Traditionally, Chinese people had a sense of cultural and intellectual superiority and regarded intellectuals as an elite with high social status. After the 1949 revolution, socialist China was anxious to remove the barriers between manual and white-collar workers by creating wage and income equality. The Communist Party of China educated and encouraged young pupils to be workers and peasants when they grew up. However, many young people shrank from the hardships of rural life and the difficulties of manual work. During the Cultural Revolution most intellectuals and educated people were regarded as bourgeois and suffered heavy criticism. They were sent to the countryside where they were supposed to receive re-education through manual labour. However, the policies and practices of the Cultural Revolution achieved an effect opposite to what was originally intended. Manual work was viewed as a punishment rather than an honour by the general public. In the 1986 survey 67.3 per cent pupils indicated that they wished to be scientists or teachers, and only 0.3 per cent pupils wanted to be industrial or agricultural workers. The careers choices of the pupils of the 1980s were still somewhat coloured by these cultural and historical events. But in the 1990s great changes have taken place in the economy. Shanghai is becoming an international business city and has been called the "New York of the East" by Westerners. It has

produced millionaire businessmen and businesswomen, who are the envy of many other Chinese. A large number of joint-ventures and private enterprises have been set up, producing a high-salary class. The majority of Shanghai dwellers would like to work as businessmen/businesswomen or clerks in joint-ventures or rich private enterprises in order to have an opportunity to enter the high-salary class.

In the 1990s the majority of schools in Shanghai have opened up the school campus walls to make shops, or to rent space to businesses in order to make money.[2] Since 1986 with decentralised management, all schools and universities have had to make a profit by themselves. Universities ask all departments to try to make money independently. Each department persuades a few staff to do full-time business in order to make money for other staff. Schools have the right to rent out their premises. All three selected secondary schools in this survey had rented some of their school buildings to business companies. For example, school building in School 2 (mixed academic school) has eight storeys. The first three storeys have been rented to businesses: the first floor is a dance hall, the second floor houses the offices for the dance hall, and the third floor comprises business negotiation and conference rooms. These three storeys were classrooms and teachers' offices before and now are beautifully decorated and luxuriously furnished company offices. All the business managers and clerks are well dressed in high-quality suits. In contrast, all the classrooms look shabby and the teachers wear old-fashioned clothes. The teachers' offices are very crowded with eight teachers to one office. Such poor working conditions

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[2] In Shanghai all school campuses are walled, with usually one main door and one back door. The main door is the only entrance and exit, while back door is for use in emergency only. People outside school, even pupils' parents, are not allowed to enter the school campus without an important reason. The school campus is separated from the street by this wall. If a school opens up its campus wall, shops can be built on the street.

have a strong influence on young people's careers choices. Because schools are normally not located in commercial centres and schools also have to pay high taxes to rent their premises, schools cannot make good profits from companies. Many small schools have no space to rent out for profits in Shanghai. This situation makes pupils feel that businessmen/businesswomen can gain much higher incomes than teachers, which might be the main reason why pupils pursue the occupation in business and give up choosing the occupation of teacher.

To the Chinese, the job of manager tends to be associated with that of a business manager, who employs other businessmen and women. Managers can receive very high salaries, but it is difficult to become a manager. Only when a businessman or woman is extremely successful in his or her career can he or she be promoted to the post of manager. For the above reasons the jobs of teacher and scientist are no longer very attractive, and many young people would prefer to be businessmen/businesswomen, clerks or managers in joint-ventures or private companies.

The job of doctor, both in western and Chinese medicine, is attractive to each year's pupils. In China a doctor's job is known as the "rubber rice bowl", which can never be broken. Doctors do not run risks, like business people, in their jobs. Their salary is not as poor as that of teachers. These reasons may encourage some pupils to choose the job of doctor.

Some younger pupils in Primary 6, Juniors 1 and 2 want to be soldiers, sportsmen/sportswomen, policemen/policewomen, pilots and artists. This may be related to their psychological development. These younger pupils' careers expectations are still coloured by their imagination, which is influenced by films, novels and TV shows, etc. As they grow up, their career aims become more realistic. For example, the jobs of sportsman/sportswoman and artist require very special talents and job

opportunities are limited. Soldiers, policemen/policewomen and pilots have to work hard and take risks, and their jobs are not always as stimulating as described in novels and films.

As they advance at school, more pupils want to be lawyers, designers and accountants. These occupational expectations may be due to the economic development in Shanghai. With the reforms of the economy and the establishment of legal systems, many lawyers are needed. With increased product competition, the job of designer is becoming popular. As an international business city, Shanghai also needs a lot of accountants. Therefore, pupils' careers choices reflect local labour markets.

Interestingly, 2.5 per cent of pupils in Senior 3 want to be politicians. These pupils are in the same class. They said, in answering the open question why they chose this occupation, that they often get together with several close friends to discuss politics. Some of them choose to be politicians under the influence of their peers. They think that some Chinese politicians lack the special talents needed to deal with government events. If they could become politicians themselves, they could do the job better. Some of the young want to be international political leaders, such as president of the United Nations. These pupils believe that politicians are the most powerful people. If a person has power, he or she will be in possession of everything, including happiness and money. The parents of many of the young were never rich and were always controlled by others because they lacked power. So the young would like to try their best to be powerful in their careers. The pupils' careers choices are influenced by family, peers and society.

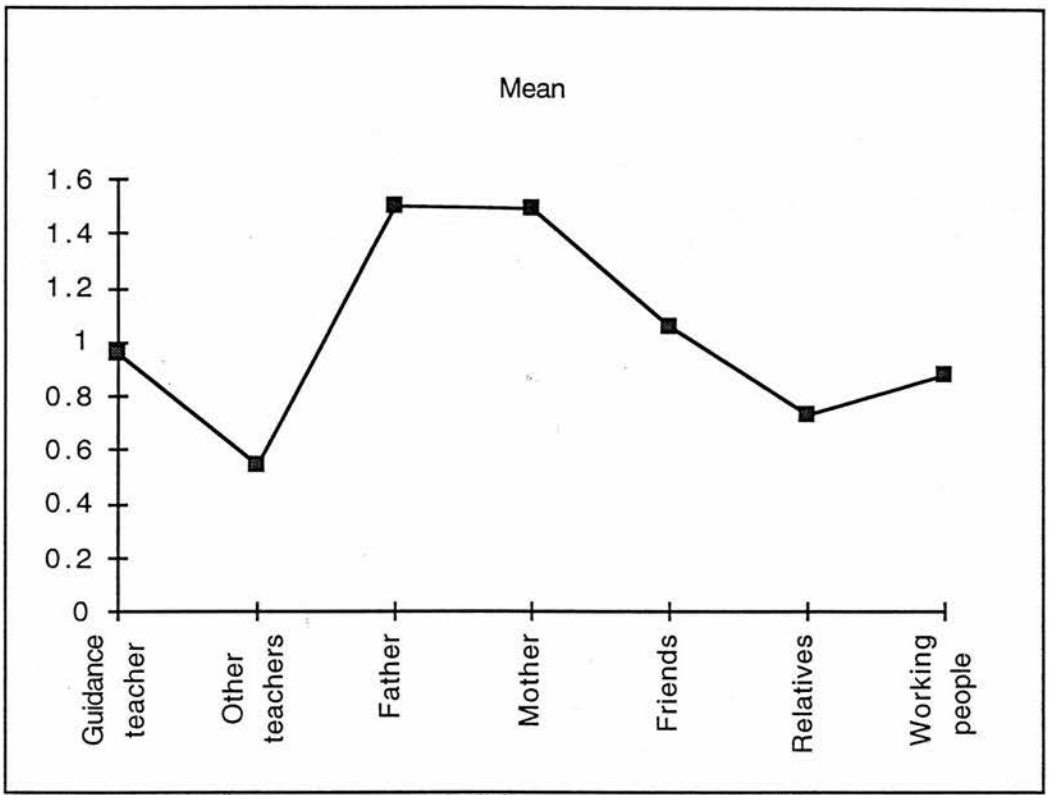
The job expectations of boys and girls overlap in some, but not all, respects. Because the careers choices of both boys and girls are influenced by society, school and family, jobs like scientist, teacher, soldier, doctor, artist, manager, sportsman/sportswoman, accountant, clerk, businessman/ businesswoman

and lawyer are chosen in each school year. However, young people's careers choices are also affected by their gender. More boys want to be scientists, soldiers, businessmen and managers, while girls would prefer to be teachers, doctors and clerks. Some boys want to be pilots, policemen, technicians and politicians, while some girls want to be designers, tour guides and journalists. This may be due to the different experiences of boys and girls in schools and at home. Boys are expected to be brave, strong and adventurous and are therefore suited to jobs like soldier, businessman, pilot, technician. Girls are expected to be gentle, patient and aesthetic and therefore feel they are suited to jobs like doctor, teacher and clerk. However, it has been found from the comments made by girls in questionnaires that some female pupils are challenging these traditional ideas. They argue that females make better businesswomen and managers than males because females are good at communication and management (see Chapter 7).

4. People from whom pupils get help in making careers decisions

The pupils were asked to rank the relative helpfulness of people in their careers choices, according to whether they were a lot of help, some help, no help or not applicable.

Figure 4.4. The mean of the people from whom pupils get help in making careers decisions



Notes: 2 = a lot of help 1 = some help 0 = no help

Figure 4.4 (the detailed data can be seen in Table 4.6 in Appendix 6) shows the relative helpfulness of people when pupils come to choose a career. It shows that pupils identified their fathers and mothers as their primary source of help. The second source of help was friends, followed by guidance teachers.

The pupils were further asked whether they had got careers advice from their parents and guidance teacher. The results are shown in Table 4.7 below.

Table 4.7. The number of pupils who get careers advice from their parents or guidance teacher

Source of help	Frequency (f)	Percentage (%)
Parents	549	77.8
Guidance teacher	143	20.7

Table 4.7 reveals that 77.8 per cent of pupils get careers advice from their parents, while only 20.7 per cent get careers advice from their guidance teachers.

The strong influence of parents on pupils' careers choices is the result of cultural factors. In the past in China the family was the most important milieu within which the individual realised himself, and even today under the "one family, one child policy", the family is still a very important social and economic unit. Family ties are close and the situation of each family member can influence the social prestige of the entire family. Therefore, it seems natural for parents to intervene in and even make their children's careers choices.

Friends are the second most important source of help for young people when choosing a career. In China the majority of young people have no brothers or sisters because of the "one family, one child policy". They want close friends whom they can treat like brothers and sisters, and with whom they can discuss everything. It is therefore natural that young people seek their friends' opinions when choosing a career.

In secondary schools in Shanghai each class has a guidance teacher who is responsible for helping pupils choose a career. But Table 4.7 shows that most pupils (79.3 per cent) have not discussed their career aims with their guidance teachers. This might be due to the system of school and teacher evaluation in Shanghai where the education bureau assesses a school by the

percentage of pupils who go on to enrol in colleges and universities. A school evaluates a guidance teacher's work according to the average exam marks of his or her classes. Careers guidance is not evaluated and guidance teachers spend most of their time encouraging their pupils to gain high marks in exams so that they may enter higher education. Less academic pupils receive less attention and have little chance to discuss their career aims with their guidance teacher.

5. Analysis of variables that influence pupils' higher education expectations and careers level and type choices

In order to explore the factors that influence young people's careers choices, pupils were asked to write down whether they planned to enter higher education, and which job, realistically, they would like to do. They were also asked to write down their sex, school, class, parents' employment, and parents' jobs.

Pupils' job preferences and parents' jobs were sorted out into six categories according to the occupational levels given by the *British Standard Occupational Classification* (Government Statistical Service, 1991). These six job levels rank from high to low: professional, managerial and technical, skilled (non-manual), skilled (manual), partly skilled, and unskilled.

Professional jobs include chemist, biological scientist, software engineer, mechanical engineer, medical practitioner, solicitor, architect, university and polytechnic professional, etc.

Managerial and technical occupations include underwriter, investment analyst, secondary and primary education teaching professional, marketing and sales manager, travel agent manager, laboratory technician, engineering technician, quantity surveyor, nurse and clothes designer, etc.

Skilled (non-manual) occupations include clerk, restaurant and catering manager, sound and video equipment operator, driving instructor, book-keeper, counter and cashier, storekeeper, receptionist and computer operator, etc.

Skilled (manual) occupations include bricklayer, painter and decorator, tool maker, electrician, plumber, weaver, tailor, carpenter, chef, nursery nurse, hairdresser and barber, etc.

Partly skilled occupations include roofer, sewing machinist, gardener, security guard, housekeeper and caretaker, etc.

Unskilled occupations include goods porter, road construction and maintenance worker, messenger, cleaner, domestic worker, postal worker and catering assistant, etc.

The jobs were also categorised according to Holland's six occupational types: "realistic", investigative, social, enterprising, artistic and conventional (Holland, 1985).

"Realistic" type jobs include radio operator, mechanical engineer, civil engineer, surveyor, dental technician, electrician, toolmaker, carpenter, tailor and mechanic.

Investigative type jobs include economist, physician, physicist, chemist, psychologist, medical lab assistant, weather observer, dentist, x-ray technician and computer operator.

Social type jobs include interviewer, teacher, minister, librarian, social and group worker, counsellor, business agent, therapist, nurse, sociologist and foreign service officer.

Enterprising type jobs include banker, market analyst, underwriter, lawyer, judge, personnel recruiter, warehouse manager, restaurant manager, office manager, production manager, and salary and wage manager.

Artistic type jobs include drama coach, journalist-reporter, foreign language interpreter, musician, designer, artist, actor/actress, photographer and composer.

Conventional type jobs include accountant, office worker, clerk, secretary, bookkeeper, cashier, proofreader, and data processing worker.

Following this, Logistic Regression was employed to analyse the relationship between the pupils' higher education expectations, the level and type of their careers choice, and personal and family factors.

Factors influencing pupils' higher education expectations

Table 4.8 below shows that the majority of pupils (85.2 per cent) had clear ideas as to whether they planned to enter higher education or not. 62.3 per cent of pupils planned to enter higher education, while 22.8 per cent did not.

Table 4.8. Frequencies of pupils' higher education expectations

	Frequency (f)	Percentage (%)
Planning to enter higher education	431	62.3
Not planning to enter higher education	158	22.8
Don't know	103	14.9

Table 4.9. Factors that influence pupils' higher education expectations (crosstabulation)

Covariates	P-value	Significance	Number
School	0.00000	high	589
Sex	0.89308	none	589
Father's job level	0.11632	none	575
Mother's job level	0.13021	none	571
Father's qualifications	0.87208	none	519
Mother's qualifications	0.20913	none	567

Table 4.10. Logistic regression analysis of factors that have the most significant influence on pupils' higher education expectations

Covariates	P-value	Number
School	0.0000	481

Tables 4.9 and 4.10 indicate a highly significant correlation between the pupils' higher education expectations and their school type attendance ($p<.01$).

In this survey the sample schools were selected on the basis of the schools' academic levels. Therefore the type of school indicates a pupil's academic achievements. Pupils' higher education expectations were more closely related to their performance in school than to anything else: the higher a pupil's academic achievements, the higher his or her expectations of higher education.

However, there was no correlation between the pupils' higher education expectations and other factors such as sex, mother's and father's job levels, mother's and father's qualifications.

This result is probably due to the enrolment policies of universities and colleges, which select pupils on the basis of their marks in standard exams. A pupil's academic achievements are the most important factor in determining whether or not a pupil can enter college or university.

The majority of pupils are only children at home. Parents would like their only child, whether son or daughter, to enter college or university. Pupils who enter university can win honour for their family, and university graduates have a greater chance of finding high level jobs than do school leavers. This might be a reason why gender is not a factor which affects young people's higher education expectations.

It is interesting to explore in more detail why social and economic class has apparently no influence on young people's higher education expectations. In the 1980s China's economic reform was in the stage of experiment and strict tax and legal systems were not in force. The result was that a lot of poorly educated self-employed people became millionaires.[3] People often use the popular saying "selling knowledge at universities rather than selling eggs in the streets, using a scalpel in hospital rather than using a razor in a barbershop" to express the situation of unequal income. This means that poorly educated old people selling eggs in the street could make more profit than university professors, and poorly educated barbers could earn more than surgeons. Salary did not relate to people's educational levels. Many unusual situations occurred: for example, one university professor sold "tea eggs" on the street and some school guidance teachers sold snacks to their pupils as their second jobs. There were two reasons why professionals chose to do a second job. One was to make money: selling "tea eggs" or snacks provided a higher income than their salary. The other was to challenge

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[3] Personal interview with Shao Eiling, associate professor of Vocational and Technical Education at the East China Normal University, on 11 April 1994.

government policy because they were not satisfied with the situation whereby people's incomes did not match their qualifications.[4]

In the 1990s, on the one hand self-employed people are becoming richer because they can use their money to do business, while on the other hand they are finding it more and more difficult to do business without sufficient knowledge. One businessman told me on the train from Shanghai to Changzhou on 3 April 1994 that he lost 100,000 yuan (about £7800) because he could not read a contract properly and had insufficient knowledge of the new tax system. Such people want their children to enter university in order to help them run businesses in the future. However, they cannot provide their children with study guidance and an educational environment. In April 1994 the author went back to Shanghai and found some advertisements on the campus at the East China Normal University for private tutors. One said: "Teacher wanted. If a teacher can provide lodging for my son (primary 4), I will pay 2000 yuan a month" (2000 yuan is equal to three-months' income for a teacher). But no teacher wanted to take on this extra job. My previous colleagues at the university said there were two reasons. One was that teachers have small flats, with no space for another child, and the other was that these children may have developed bad habits, which might in turn influence the teacher's own child.

In this situation, several private schools have been set up. People call them "aristocrat schools" because of their extremely high tuition fees. In 1994 a Taiwanese rented part of the University Settlement Primary School of the East China Normal University to set up a private class (primary one). He planned to enrol 30 pupils and the tuition fee was 100,000 yuan (about £7800) each year (equal to ten years' salary for a university professor or

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[4] Personal interview with Shao Eiling, associate professor of Vocational and Technical Education at the East China Normal University, on 11 April 1994.

twenty years' salary for a lecturer). Surprisingly, there were more than 50 applicants.[5]

In 1995 the Chinese government attempted to abolish private schools and classes that were profit-making enterprises. However, it is still difficult to find an educational solution for this new and very rich class.

The above reasons may help to explain why young people's higher education expectations, perhaps particularly in Shanghai, are not influenced by their sex and family background in this survey.

Factors influencing pupils' job level expectations

Figure 4.5 below (the detailed data can be seen in Table 4.11 in Appendix 6) shows that the majority of pupils chose the first three job levels: professional (17.2 per cent), managerial and technical (27.0 per cent) and skilled (non-manual) (35.4 per cent). Only 26 pupils (3.7 per cent) chose the latter three levels: skilled (manual) (3.3 per cent), partly skilled (0.4 per cent) and unskilled (0.0 per cent).

[5] Personal interview with Wu Huizhu, principal of the University Settlement Primary School of East China Normal University, on 5 April 1994.

Figure 4.5. Pupils' job level expectations

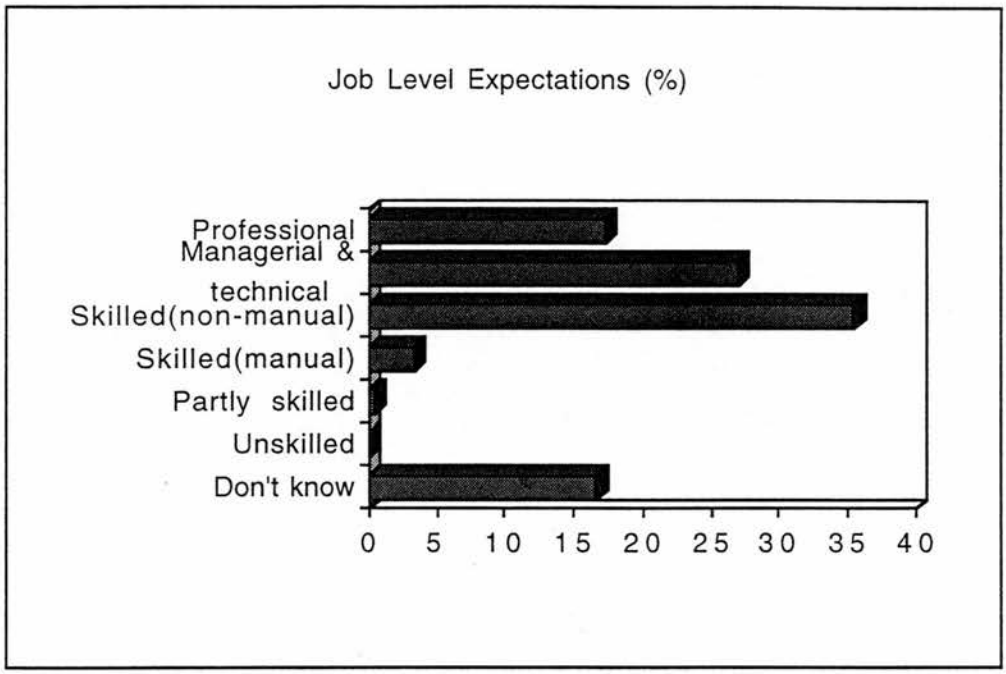


Figure 4.5 shows that the number choosing the latter three levels is too low to be used in analysis. The following only analyses the relationship between the pupils' first three job level expectations and other factors.

Table 4.12. Factors that influence pupils' job level expectations (crosstabulation)

Covariates	P-value	Significance	Number
School	0.00000	high	574
Sex	0.27351	none	574
Father's job level	0.14217	none	560
Mother's job level	0.00013	high	556
Father's qualifications	0.14217	none	560
Mother's qualifications	0.16707	none	554

Table 4.13. Logistic regression analysis of factors that have the most significant influence on pupils' job level expectations

Covariates	P-value	Number
School	0.000	542
Mother's job level	0.001	542

Tables 4.12 and 4.13 above show that there was a significant correlation between pupils' job level expectations, their academic achievements (school type attendance), and mother's job level. The pupils' academic achievement was the most important factor, followed by mother's job level.

But again there was no correlation between pupils' job level expectations and other factors (gender, father's job level, mother's and father's qualifications).

In general, a high level occupation requires employees with higher qualifications. As with pupils' higher education expectations, pupils' academic achievements are also the most important factor in their job level expectations.

However, a mother's job level also influences young people's careers level expectations. It has been found in the survey data that a mother's job level bears a close relationship with her qualifications ($p<0.01$): the higher her job level, the higher her qualifications are. This may reflect the current challenge of women with high job levels to traditional Chinese family ideology. In China both husbands and wives in Shanghai have had to work 8 hours a day and 6 days a week (since 1 May 1995 the working week has been reduced from 6 days to 5). In traditional families, after work, wives are expected to do housework and look after children, and husbands are expected to continue their studies and work in their occupations at home. However, more highly qualified women with high level jobs are not satisfied with this situation. They would like to compete with males in their careers. They often encourage their children, both boys and girls, to pursue high level jobs. As a result, a mother's job level affects her child's job level expectation.

Job levels are classified by occupational socio-economic classes, while job types are classified, according to Holland, by the similarity of job content, interests and abilities that jobs require. For example, the jobs of both engineer and carpenter are of the "realistic" type, but engineer is a professional job while carpenter belongs to the skilled (manual) level.

Table 4.14. Factors that influence pupils' job type expectations (crosstabulation)

Covariates	P-value	Significance	Number
School	0.00041	high	577
Sex	0.00000	high	577
Father's job level	0.67247	none	563
Mother's job level	0.26131	none	558
Father's job type	0.68276	none	563
Mother's job type	0.05709	none	558
Father's qualifications	0.73219	none	502
Mother's qualifications	0.29378	none	557

Table 4.15. Logistic regression analysis of factors that have the most significant influence on pupils' job type expectations

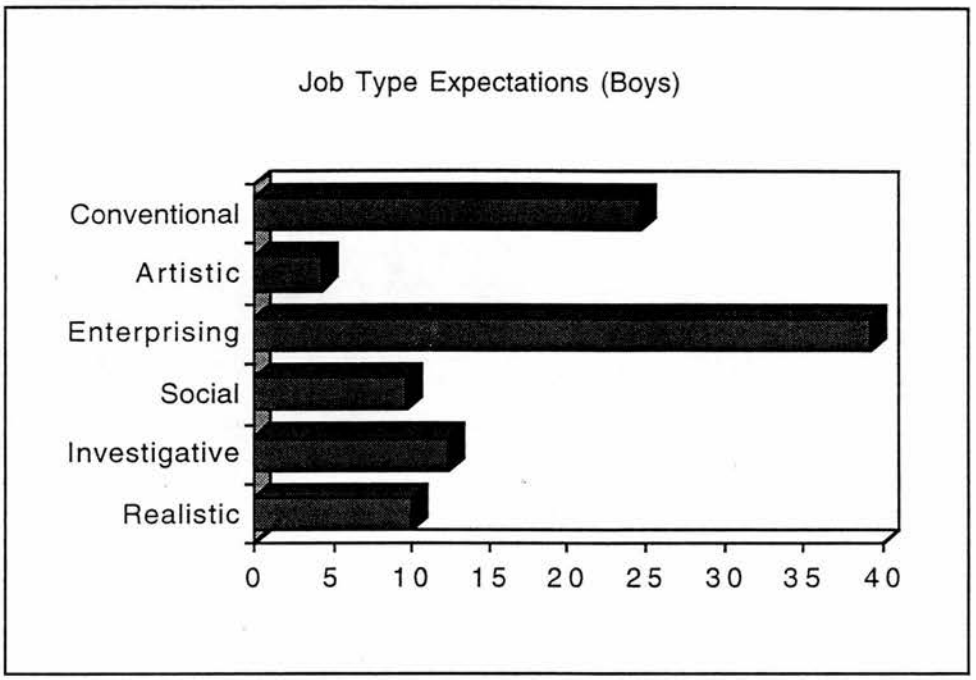
Covariates	P-value	Number
Sex	0.000	558
School	0.000	558

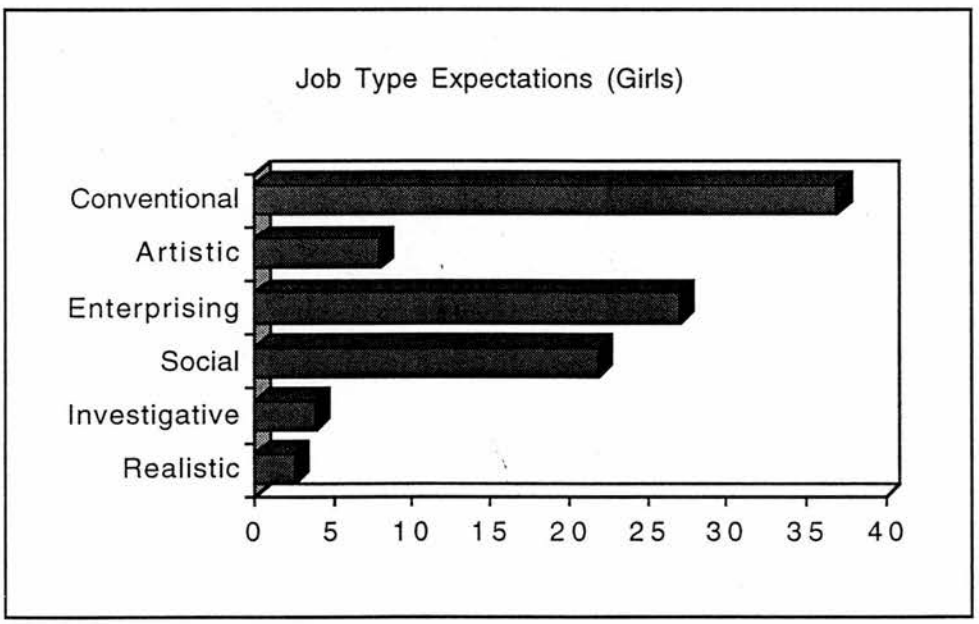
Tables 4.14 and 4.15 above show that sex was the most important factor involved in a pupil's job type expectations, followed by school type attendance.

But there was no significant correlation between pupils' choice of job type and factors such as mother's and father's job level, and mother's and father's qualifications.

According to Holland's categories of occupational types, it has been found from Figure 4.6 (the detailed data can be seen in Table 4.16 in Appendix 6) below that more boys choose "realistic" type jobs (10 per cent for boys and 2.5 per cent for girls), investigative type (12.3 per cent for boys and 3.8 per cent for girls) and enterprising type (39.2 per cent for boys and 27.1 per cent for girls) jobs. More girls choose social type jobs (21.8 per cent for girls and 9.6 per cent for boys) and conventional type jobs (36.9 per cent for girls and 24.6 per cent for boys). Furthermore, in practice, more males work in "realistic", investigative and enterprising type jobs, while more females work in social and conventional type jobs. This in turn may encourage boys to work in jobs where most workers are men, and girls to prefer jobs where most workers are women.

Figure 4.6. Boys' and girls' job type expectations (in percentages)





School type attendance is also an important factor influencing young people's job type expectations (see Table 4.17 in Appendix 6). This may be related to school careers guidance provisions. Young people in different schools receive different careers guidance. For example, in one school where

there was an "interest group of meteorology" many pupils wanted to be meteorologists. Another school invited a famous clothes designer to talk about her career, causing a few pupils in the school to pursue the job of clothes designer.

6. The changing process of pupils' career aims during the secondary school years

Pupils were asked to write down their preferred occupations from Primary 6 to Senior 3 in order to explore how many pupils changed their career aims in each secondary school year. The results are presented in Figure 4.7 below (the detailed data can be seen in Table 4.18 in Appendix 6).

Figure 4.7. The change in pupils' job level aims

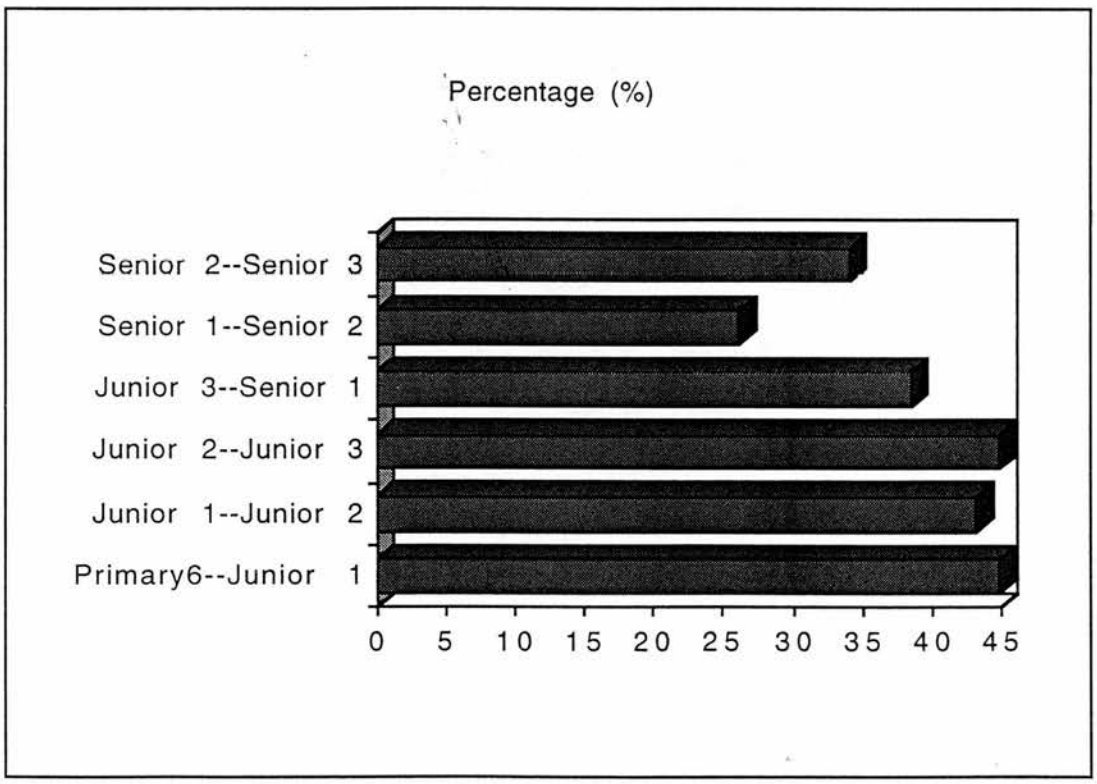


Figure 4.7 shows that a number of pupils changed their job level aims during secondary school years (44.9 per cent from Primary 6 to Junior 1; 43.2 per cent from Junior 1 to Junior 2; 44.9 per cent from Junior 2 to Junior 3; 38.5 per cent from Junior 3 to Senior 1; 26.1 per cent from Senior 1 to Senior 2; 34.1 per cent from Senior 2 to Senior 3).

Figure 4.8. The change in pupils' job type aims

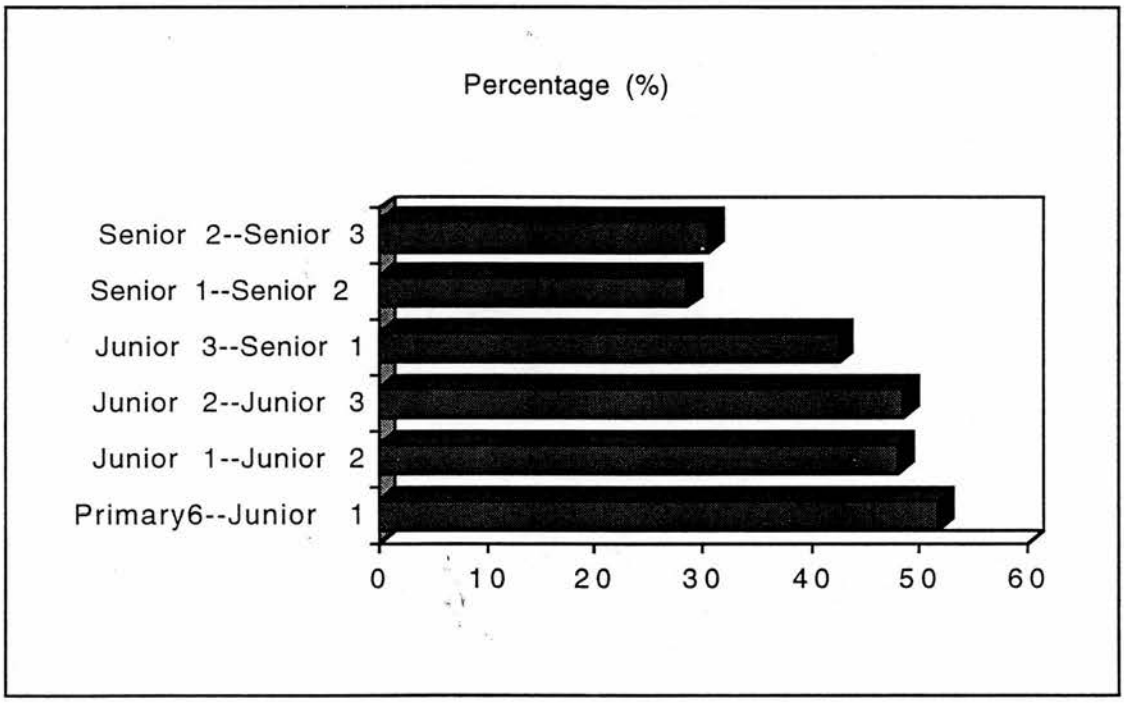


Figure 4.8 (the detailed data can be seen in Table 4.19 in Appendix 6) shows that many pupils changed their job type aims during their secondary school years (51.6 per cent from Primary 6 to Junior 1; 48.0 per cent from Junior 1 to Junior 2; 48.4 per cent from Junior 2 to Junior 3; 42.4 per cent from Junior 3 to Senior 1; 28.5 per cent from Senior 1 to Senior 2; 30.5 per cent from Senior 2 to Senior 3).

It is clear from Figures 4.7 and 4.8 that the highest percentage of pupils changed their career level and types in the year of transition from primary school to junior school. More pupils changed their career aims at junior secondary school than at senior secondary school. In the final year of junior or senior secondary school more pupils changed their career aims than in the previous year.

It would seem that the younger a pupil is, the more unstable is his or her career aim. But when faced with a real occupational choice in Junior 3 or Senior 3 a pupil would be relatively realistic and adjust his or her career aim to make a wise career choice. However, in each secondary school year many pupils change their career aims. The latter part of this chapter will explore the reasons why pupils change their career aims during secondary school.

This section has examined the percentages of pupils' careers aim changes in each secondary school year. However, it did not explore how different these changes are in each secondary school year. For example, if two pupils changed their careers aim, one may have changed his careers level aim from professional to unskilled, while the other may have changed his from professional to managerial. The change of careers level aim for the former pupil is greater than that of the latter. The next section will explore this changing value.

7. The changing value of career aims during the secondary school years

Pupils often change their career aims during their secondary school years. But it is interesting to explore how great this change is in each secondary school year.

The methods of computing the changing values were as follows. As previously described, there were six job levels ranging from high to low: professional, managerial and technical, skilled (non-manual), skilled (manual), partly skilled and unskilled.

One point was given for changing one level (e.g. from level 1 to level 2), two points for changing two levels (e.g. from level 1 to level 3), three points for changing three levels (e.g. from level 1 to level 4), four points for changing four levels (e.g. from level 1 to level 5), five points for changing five levels (e.g. from level 1 to level 6), and 6 points for changing from one job level to no job idea (don't know).

There were six types of occupation based on John Holland's terms: "realistic" (R), Investigative (I), Social (S), Enterprising (E), Artistic (A), and Conventional (C). Some of these types are closely related, others less so. The result is a hexagonal model of types, with types at the adjacent angles more closely related than those at the intervening angles, and with types at the intervening angles more closely related than those at the opposite angles (see Figure 2.1 in Chapter 2).

The methods of computing were as follows: one point was given for changing from one angle to the adjacent angle; three points were given for changing from one angle to an intervening angle; five points for changing from one angle to the opposite angle; and seven points for changing from one angle to no job idea.

Score: R---I=1 R---C=1 R---A=3 R---E=3 R---S=5

C---R=1 C---E=1 C---I=3 C---S=3 C---A=5

E---C=1 E---S=1 E---R=3 E---A=3 E---I=5

S---E=1 S---A=1 S---C=3 S---I=3 S---R=5

A---I=1 A---S=1 A--R=3 A---E=3 A---C=5

I---R=1 I---A=1 I---C=3 I--S=3 I---E=5

The results are shown in Figures 4.9 and 4.10 below (the detailed data can be seen in Tables 4.20 and 4.21 in Appendix 6).

Figure 4.9. The maximum changing values of pupils' job level aims

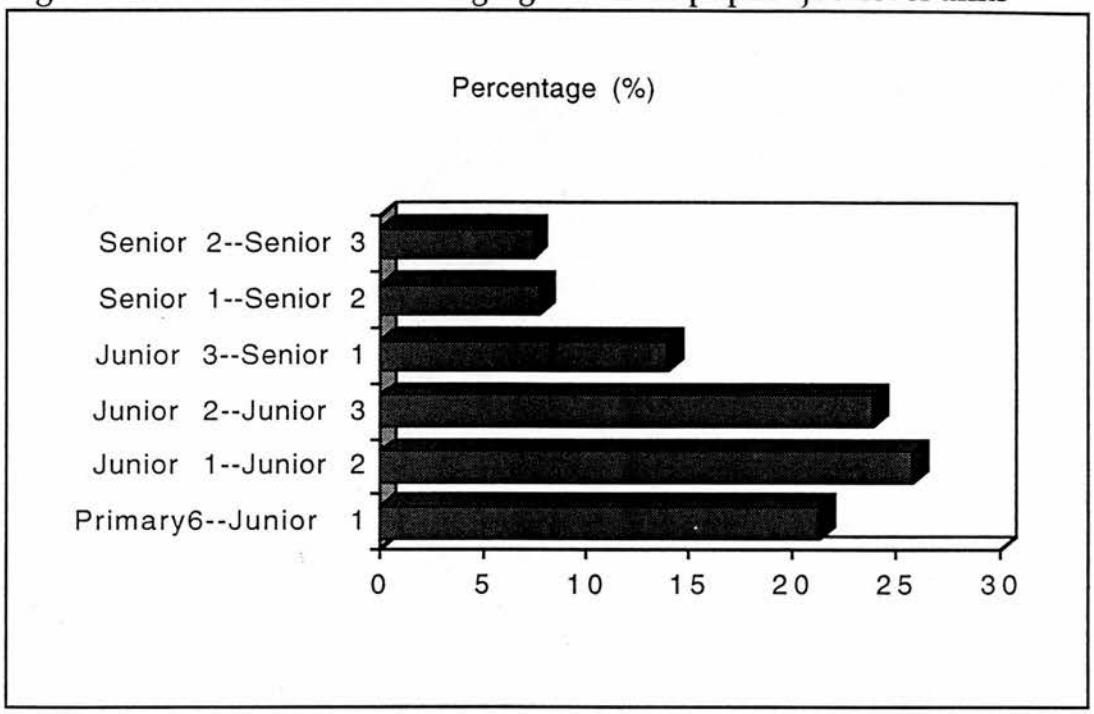
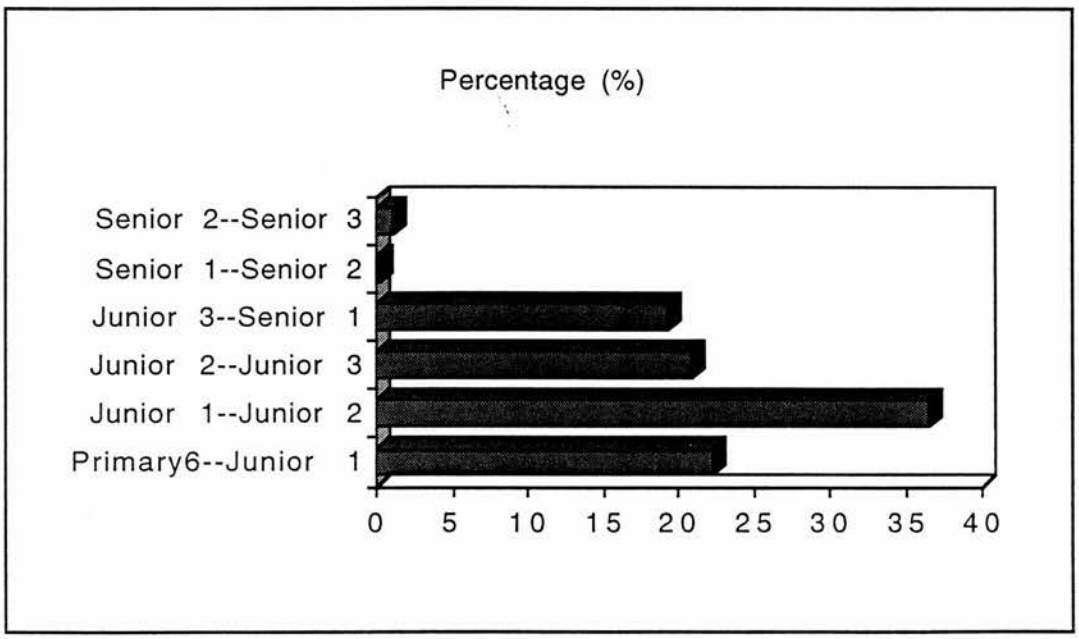


Figure 4.10. The maximum changing values of pupils' job type aims



Figures 4.9 and 4.10 show that the greatest change in careers levels and types was revealed from Junior 1 to Junior 2 (at the age of 14). The pupils' change of career aims at junior secondary school was greater than at senior secondary school. In the final two years of senior secondary school the majority of pupils did not change their career level aim, although some of them changed their career type aim.

There is a trend for young people to change their career aims between Primary 6 and Senior 1 (aged 13 to 17). By Senior 2, the career aims of most pupils remain relatively stable. Even if they have some change of career level or type, the new choice is usually close to the previous one. This may explain why when young people reach Senior 2 they have clear ideas about their academic abilities, careers interests and abilities, and the value of different careers.

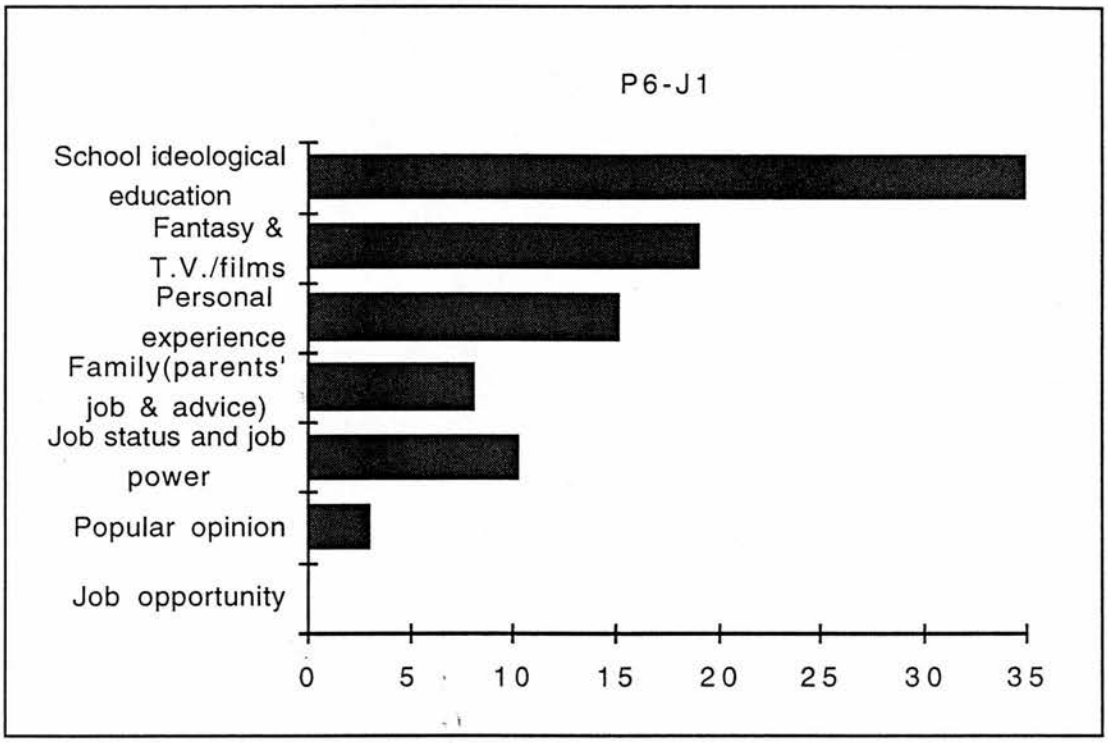
However, in Shanghai young people have to make careers choices in Junior 3 (at the age of 16). According to the survey, young people of this age are still at a very unstable stage in their choice of career. For this reason schools should introduce careers guidance earlier, perhaps from Junior 1 onwards.

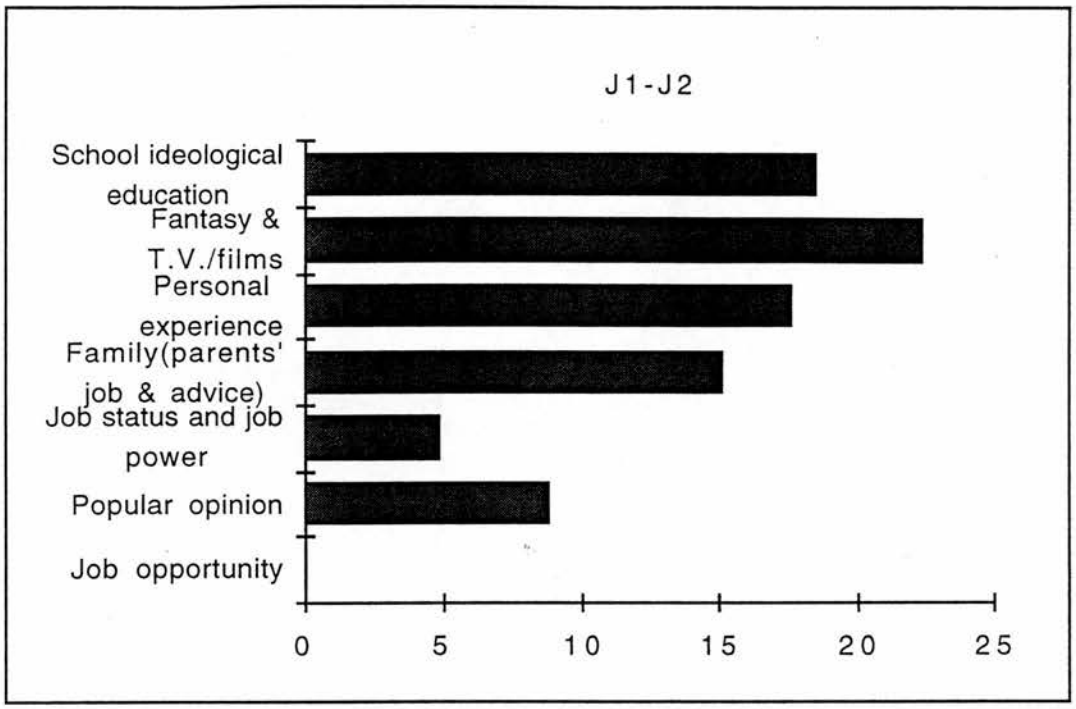
8. Reasons why pupils change their career aims during their secondary school years

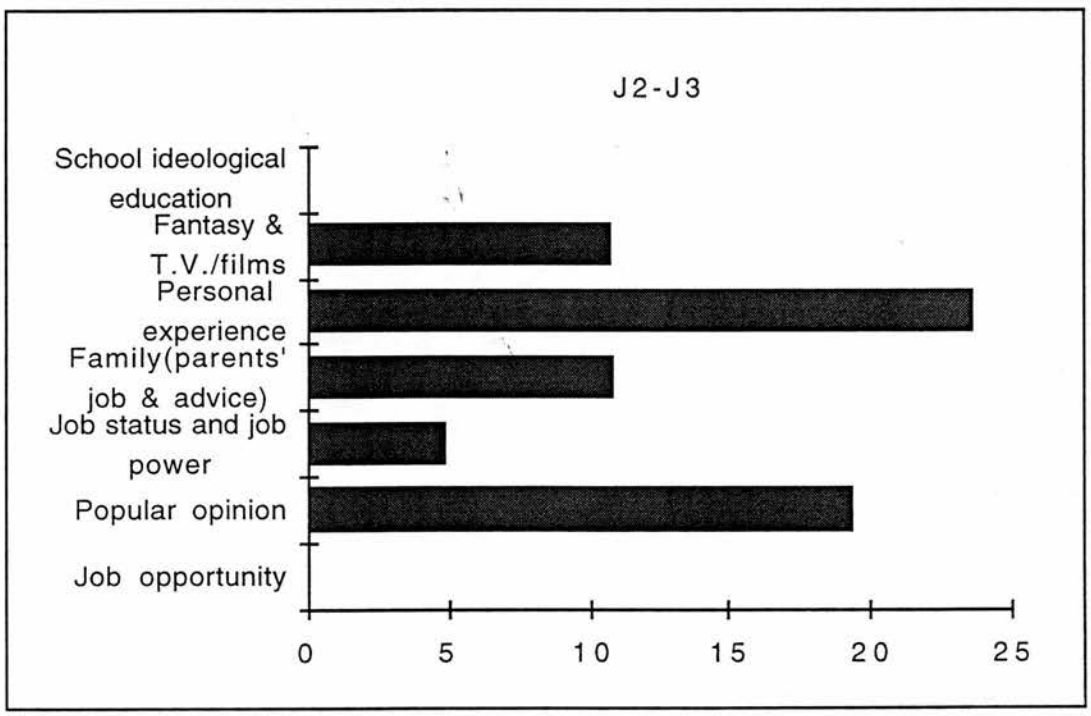
Pupils were asked to write down the reasons why they changed their career aims in each secondary school year. Their answers could be classified into seven categories: school ideological education, fantasy and T.V./films/novels, personal experience (school activities such as interest groups and competition, and personal special experience such as exam results), family (parents' jobs and parents' advice), job status and job power,

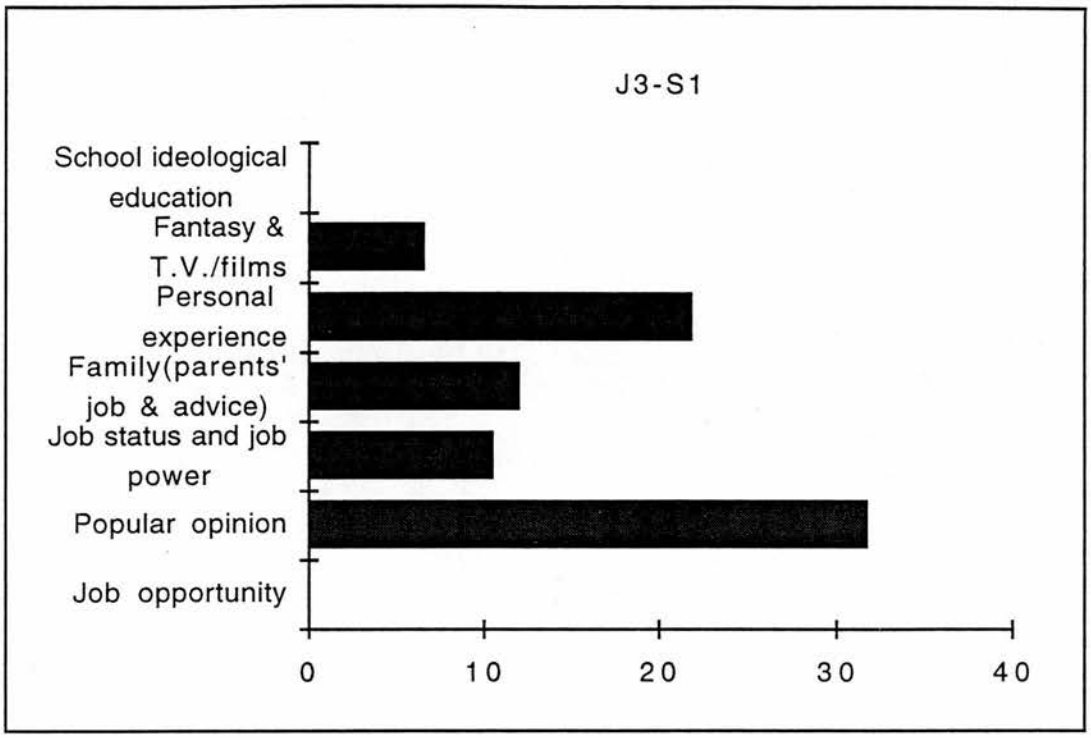
popular opinion and job opportunity. The results are presented in Figure 4.11 below (the detailed data can be seen in Table 4.22 in Appendix 6).

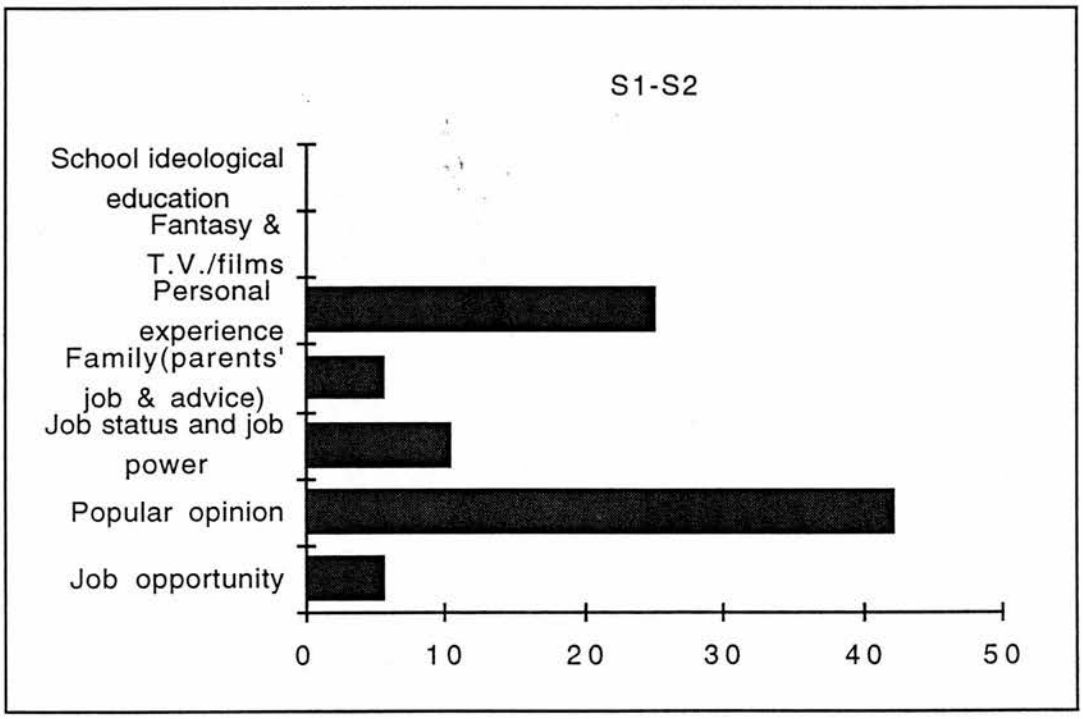
Figure 4.11. Reasons why pupils change their career aims in each secondary school year (in percentages)




J1-J2
School ideological education
Fantasy & T.V./films
Personal experience
Family(parents' job & advice)
Job status and job power
Popular opinion
Job opportunity
0
5
10
15
20
25


J2-J3
School ideological education
Fantasy & T.V./films
Personal experience
Family(parents' job & advice)
Job status and job power
Popular opinion
Job opportunity
0
5
10
15
20
25


J3-S1
School ideological education
Fantasy & T.V./films
Personal experience
Family(parents' job & advice)
Job status and job power
Popular opinion
Job opportunity
0
10
20
30
40


S1-S2
School ideological education
Fantasy & T.V./films
Personal experience
Family(parents' job & advice)
Job status and job power
Popular opinion
Job opportunity
0
10
20
30
40
50

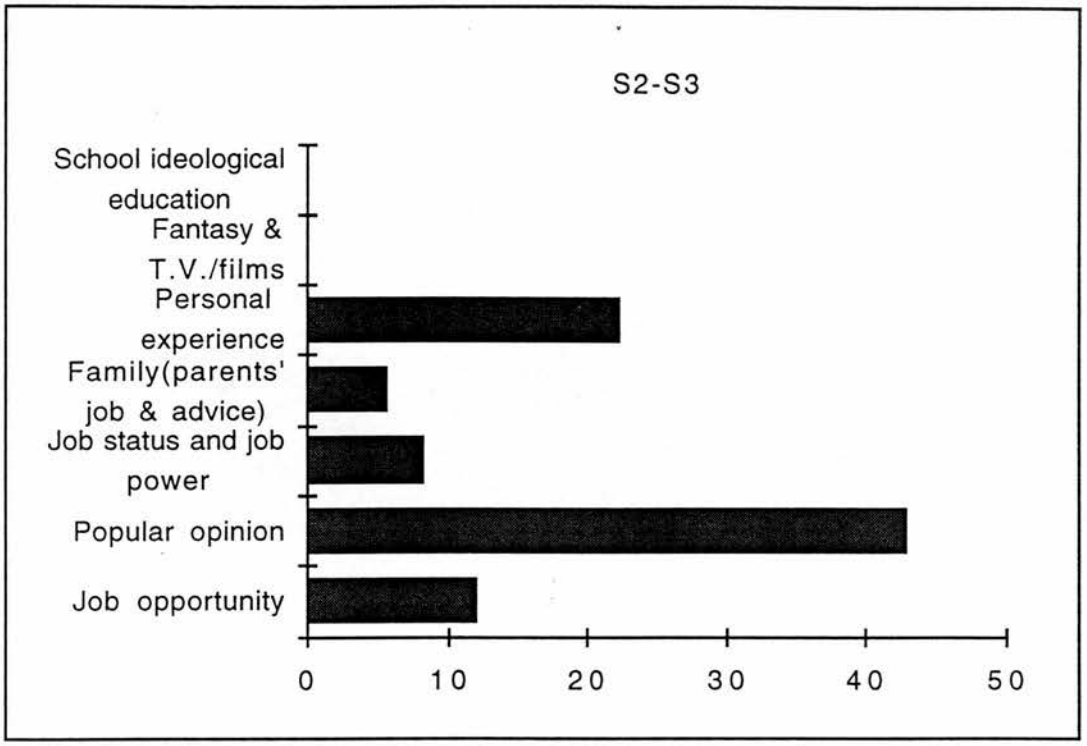


Figure 4.11 shows that school ideological education, fantasy and T.V./films/novels have a strong influence in the early stages, and that family plays an important role throughout the process of choosing a career. As pupils grow older, personal experience becomes more important. By the pupils' final two years of senior secondary school they are beginning to consider job opportunity. Public opinion is increasingly becoming the dominant factor in pupils' careers choices.

School ideological education still plays an important role in pupils' careers choices at an early stage. After the Cultural Revolution one of the aims of school ideological education was to encourage young people to consider contribution to society when choosing a career. Scientists were regarded as contributing most to society. The classroom walls of the four selected schools displayed a number of pictures of internationally famous scientists, and teachers were called "gardeners of the country". These posters encouraged many younger people to pursue jobs as scientists and teachers.

However, as pupils grew older and because of the great changes in society, many gave up their expectation of becoming scientists or teachers because of the low salary and hard work associated with these jobs, and because many pupils felt they lacked the ability to be scientists. Therefore, although school ideological education has a strong influence on young people's careers choices at an early stage, it does not sustain its influence throughout senior secondary school.

Young people spend some time watching T.V. and films and reading novels, and this has become an important part of people's lives. Pupils' impressions of careers from T.V./films/novels are coloured by fantasy. The survey reveals that T.V./films/novels had more influence on younger pupils than on older pupils, suggesting perhaps that younger pupils like to fantasise, while older pupils tend to think more realistically about their careers.

Pupils gain personal experience of careers from courses and exams, careers competitions, career interest groups, careers visiting, etc. For example, a pupil might want to be a mathematician because he or she likes maths; a pupil might change his or her mind about becoming a lawyer because he or she failed in the school speech competition; a pupil might want to be a doctor because he or she did very well in the medicine interest group. With the accumulation of personal experiences, personal interests and abilities become an important factor for pupils when choosing a career.

Job status is considered by some pupils in each school year, often due to family influence. As each family member can influence the social prestige of the entire family, parents are keen for their children to choose jobs with a high social status.

Popular opinion is always a very important factor in young people's careers choices. At present, businessman/businesswoman is viewed by the public as

the most attractive occupation. With the reform of the economy and the open-door policy, the majority of Chinese are looking for a chance to do business. Children are proud if their parents are businessmen/businesswomen, and parents would be very proud if their children studied business. In April 1994 the present author went back to visit Shanghai as already mentioned. Many people wanted to discuss the possibility of doing business between Shanghai and Scotland although they were not businessmen or businesswomen. Many people in a variety of jobs - teachers, workers, scientists, nurses, doctors - were aware of business terms, such as C.I.F, F.O.B quotation and commission. Surprisingly, one retired female teacher, who had never learnt English, talked about the matter of commission a lot. She even used the word "commission" in English. I asked her when she had learnt English. She said that everyone in Shanghai knew three English words: C.I.F., F.O.B. and commission. This kind of popular opinion is increasingly becoming an influential factor in pupils' careers choices.

Job opportunities tend not to influence pupils until the later stages of secondary school when they begin to think realistically about their careers.

9. Summary and Discussion

Summary

In the light of the above information a number of conclusions can be made about young people's careers choices and careers development during their secondary school years in Shanghai, which can be summarised as follows.

The criteria for choosing a career are coloured by the changing political, economical and educational situation in China. Young people of the 1990s rank personal abilities and interests as the most important factors when

choosing a career. However, young people also consider what reward they can gain from jobs, such as salary. Benefit to society is no longer regarded as an important factor for young people of the 1990s when considering a job.

Young people's occupational preferences are influenced by the local labour market. With the changing labour market in Shanghai more and more new jobs are appearing, such as international businessman/businesswoman and clerk in a joint-venture or private enterprise, and these are tending to attract pupils away from the traditional career of teacher, which represents hard work and poor pay.

Parents are the main source of influence on young people when choosing a career. Because most young people have no brothers or sisters, they have several close friends with whom they like to discuss their careers plans. The majority of pupils have not discussed their career aims with their guidance teachers.

Pupils' school type attendance, which often determines their academic achievements, is the main influence on their higher education expectations and their careers level aims. They pitch their careers level aims according to their understanding of their academic ability within the schooling process. Pupils in schools with high academic standards have higher education expectations and careers level aims than those in schools with low academic standards.

Family background, in terms of socio-economic class and parents' job levels and qualifications, does not appear to influence young people's higher education expectations directly although a mother's job level influences her child's job level expectations.

Gender influences young people's job type expectations. Boys tend to choose occupations in which most workers are men, such as technology, while girls

tend to choose occupations in which most workers are women, such as teaching. But some girls are now challenging these traditional ideas and would like to compete with males in careers expectations.

School careers guidance interventions, such as careers speeches and interest groups, influence young people's careers expectations. Careers discussions with peers sometimes make young people choose similar jobs.

During each secondary school year many pupils change their career aims, but their aims become more stable as they grow older. However, in the final year of junior or senior school more pupils adjust their career aims than the pupils in the previous years.

During their secondary school years, the majority of pupils change their career aims most at junior secondary school. In the final two years of senior secondary school very few change their careers level aims.

There are several main reasons why young people change their career aims. In the early stages school ideological education has a very strong influence, but this becomes less important for senior secondary school pupils. Fantasy, T.V./films/novels also have a strong influence on young people at an early stage. The family has always played an important role in pupils' careers choices, but pupils' own experiences gradually assume a more influential role. Job opportunity is considered only by pupils in their final two years of senior secondary school. Public opinion is increasingly becoming the dominant factor in pupils' choice of career.

Discussion

Matching model

The main focus of the matching model is based on the concept of matching people with jobs. The model assumes all people differ in interests and abilities; thus careers guidance is a matter of matching interests and abilities with job opportunities.

This survey confirms one of the views of the matching model that personal ability and interests are very important factors in people's choice of career.

However, the survey also points to some shortcomings of the matching model. First, young people's choice of career is not only a question of matching personal interest and ability with job requirements. First and foremost, young people's careers choices are influenced by the changing political, economic and employment systems, by the local labour market, by local culture, by the culture of the school, by the psychological development of young people, by family and friends, etc.

Second, young people's choice of careers level is determined by their school achievements and mother's job level.

Third, young people have a career aim from an early stage which develops from there. Many change their careers plans in each secondary school year, the biggest change being not in the final year of school, but in the year between Junior 1 and Junior 2. This suggests that careers guidance should start early.

Personality type model

Holland's personality type model postulates that an interest inventory is a personality inventory and that people seek environments congruent with their personalities. He based his vocational interest inventory on six major

personality types who will tend to choose among six main occupational environments where they can use their abilities, interests and aptitudes, and share with other occupants common attitudes and values. The six personality types and occupations are: "realistic", investigative, social, enterprising, artistic, and conventional.

According to this survey many young people would like to be clerks in joint-ventures or private companies. There are many job opportunities in this field in Shanghai. Most joint-ventures and private enterprises are business companies, whose clerks require multiple abilities, including languages, communication skills, and computer and clerical skills. According to Holland's personality type classification, those with computer ability belong to the "realistic" type, those with communication skills belong to the social type, and those with clerical ability belong to the conventional type. Based on Holland's model, people of the social type are not suitable for jobs of the "realistic" type. The social, "realistic" and conventional type make up a triangle in Holland's hexagonal model. If Holland is correct, none of these types would be able to work as a clerk in a joint-venture or private company.

However, it is well known that people's abilities can be developed to suit the circumstances. For example, people living in a big city normally have better communication skills than those living in remote rural areas, because they have more chance to develop these skills. It is doubtful that a person with good interpersonal ability would lack computer ability. In fact, these two abilities are becoming increasingly important for most occupations. This aspect of Holland's model might no longer work in contemporary society.

Developmental model

The survey shows that young people begin to choose a career at an early stage. All pupils have careers ideas as early as Primary 6 (13 years old).

Choosing a career is a process from the ideal to the realistic, and is not a single event. This approach is emphasised by developmental theorists, such as Super.

However, the survey contradicts Super's model of distinct stages of careers development: fantasy (4 -10), interest (11 -12), capacity (13 -14), tentative (15 -17), and transition (18 -21). The survey reveals, on the contrary, that choosing a career is a highly individual process. Even in Junior 3 (15 year old) there are still 10.8 per cent of pupils in the fantasy stage. For example, a few boys wanted to be policemen after watching several Hong Kong movies about policemen and bandit gangs. Their careers choices were not based on their personal interests, abilities and job requirements. Personal experience from school activities can help young people understand their own interests and abilities. This factor is an important one in each secondary school year, not only for young people at the age of 11 to 14, as proposed by the developmental model. Moreover, in contrast with the developmental model, popular opinion, not personal psychological development, becomes more important as pupils grow older. Young people would like to pursue jobs which are seen by many as attractive. A number of pupils in their final year of senior secondary school regard job availability as the most important factor in their choice of career.

Opportunity structure model

The opportunity structure model supposes that occupational destinations are determined not by individual choices but by opportunity structures. People do not typically 'choose' occupations in any meaningful sense: they simply take what is available. People's occupations are decided by stratified occupational systems, by the nature of education and by family and social class.

The survey results confirm that young people's occupational preferences are influenced by job opportunities. They also reveal that parents are the fundamental source for their children's choice of career. However, this is not to say that these factors alone determine young people's careers choices. The survey reveals that young people's careers choices are very individual and influenced by many different factors, such as understanding their own interests and abilities, public opinion, peers, etc.

In contradiction to the opportunity structure model the survey shows that family background, including father's socio-economic class and parents' qualifications, influences neither the level nor the type of job that a young person pursues. Only a mother's job level influences young people's careers level expectations. Therefore, social and economic class do not determine a young person's choice of career as advocated by the opportunity structure model.

Combination model

The combination model, so called by the author, supposes that careers guidance is to help people find the best combination between personal characteristics and the needs of the community.

The results of the survey in Table 4.1 support one view of the combination model that young people rank personal abilities and interests as very important factors when choosing a career. It seems from Table 4.20 that young people's career aims not only change with their interests and abilities, but also with other factors, such as popular opinion. Sometimes social factors play dominating roles in young people's careers choices. Young people would like to choose jobs that express their interests and abilities. But when they are facing specific job choices, other factors, such as salary and public opinion, may become the dominant factors. This may be a result of the difficulty of understanding oneself and gaining information. For

example, the job of businessman/businesswoman is considered by public opinion to be the best job, and it attracts many young people. However, these pupils have no working experience of business, and have no way of knowing whether they are capable of doing this job. Some of them might follow public opinion and focus on the job's salary. Moreover, in Shanghai, there is no centre of occupational information and no careers service offices. School guidance teachers are responsible for developing careers guidance. It is very difficult for guidance teachers to collect occupational information. Chapter 7 will study the issue of whether guidance teachers can provide enough careers information for their pupils.

There is also the question of the community's needs. With the development of market economy, it is very difficult for young people to get enough occupational information. They choose careers levels based on their school academic achievements, which limit their choice of higher education levels. They choose specific occupations according to many factors, such as gender, public opinion, parents' suggestions, school careers interventions, etc.

Therefore, young people's careers expectations are not only a matter of matching personal characteristics with the needs of the community, but are the result of a very individual and complex process, which in turn is influenced by personal characteristics, society, family, school and peers.

CHAPTER 5

AN ANALYSIS OF PUPILS' EXPERIENCE AND PERCEPTION OF CAREERS CHOICES IN EDINBURGH

Chapter 5: An Analysis of Pupils' Experience and Perception of Careers Choices in Edinburgh

1. Introduction

This chapter will explore pupils' experience and perception of careers choices in Edinburgh and further examine the five main careers guidance models: the matching model, the personality type model, the developmental model, the opportunity structure model and the combination model, in the context of Scotland. The topics discussed will be the same as those in Shanghai (see Chapter 4), including criteria for choosing a career, occupational preferences, the factors that influence pupils' higher education expectations and careers choices, and the change in occupational aspirations over time and the reasons behind these.

2. Pupils' criteria for choosing a career

According to preliminary work and a pilot study described in Chapter 3 it was found that pupils' careers choices are mainly influenced by ten criteria: personal abilities, personal interests, salary, status/prestige, working conditions, chance to advance, secure and stable employment, qualifications, job opportunities and the benefit of a job to society.

Pupils were asked to rank their criteria for choosing a career from the most important (1) to the least important (10). Table 5.1 shows the average ranking results from 343 pupils.

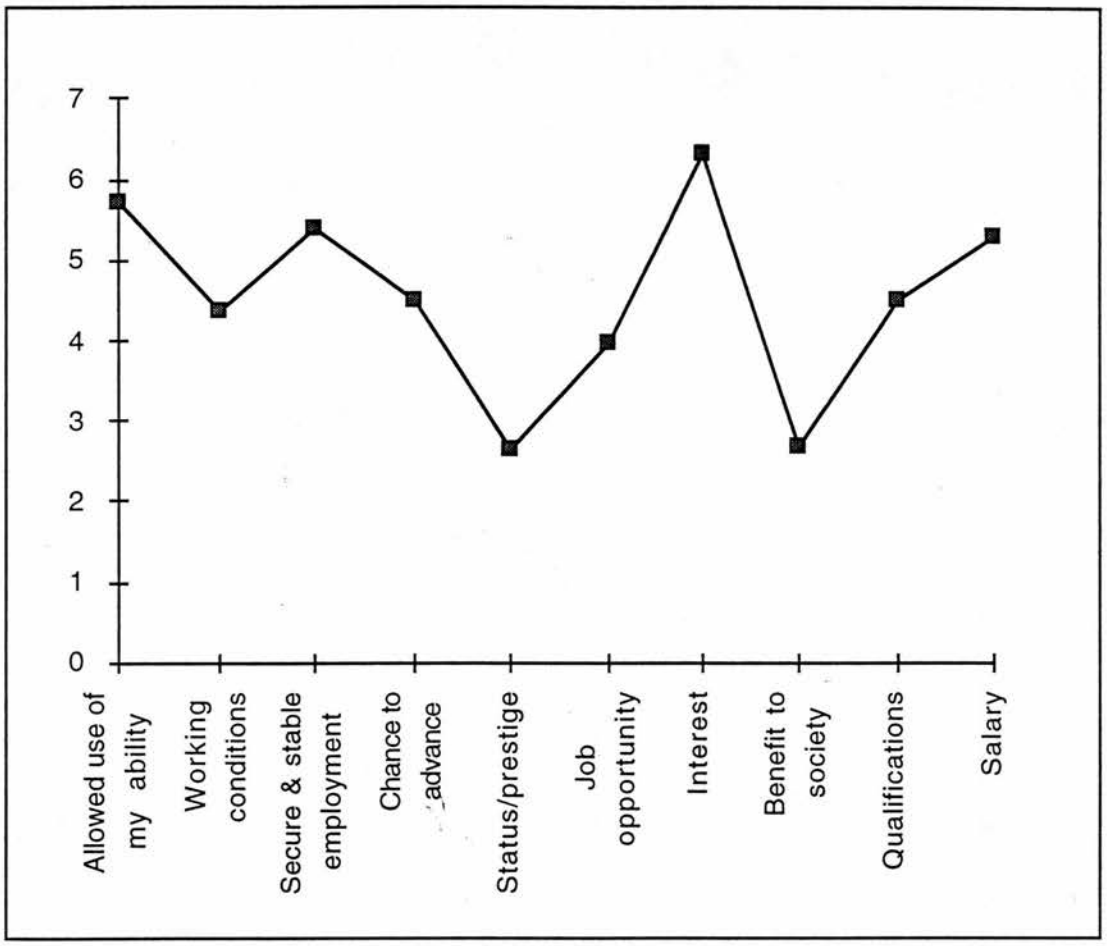
Table 5.1. The mean, standard deviation, and ranking of the criteria for choosing a career (N=343)

Criteria	Mean	SD	Ranking
Allowed use of my ability	5.72	2.70	2
Working conditions	4.38	2.62	7
Secure and stable employment	5.39	2.72	3
Chance to advance	4.50	2.28	6
Status/prestige	2.64	2.17	10
Job opportunity	3.96	2.40	8
Interest	6.33	2.80	1
Benefit to society	2.69	2.68	9
Qualifications	4.51	2.93	5
Salary	5.28	3.10	4

Mean: 10 = most important to 1 = least important
Ranking: 1 = most important to 10 = least important

In order to clarify Table 5.1, the information has been charted in Figure 5.1 below.

Figure 5.1. The mean of the criteria for choosing a career (N=343)



Mean: 10 = most important to 1 = least important
Ranking: 1 = most important to 10 = least important

Table 5.1 and Figure 5.1 show that pupils regarded personal values (personal abilities and interests) as the most important criteria when choosing a career. They ranked secure and stable employment as the second most important, followed by economic value (salary). They regarded job possibility (personal qualifications and job opportunity) and material value (chance to advance

and working conditions) as not very important. Social value (benefit to society) and job status were viewed as the least important criteria.

Table 5.1 also shows that pupils' criteria for choosing a career were highly individual and varied considerably. It would appear that their criteria reflect school careers intervention, the local economy, culture and tradition. First, Edinburgh pupils, like their Shanghai counterparts, think primarily about getting a job in which they can use their abilities and interests. There has been active careers guidance in Scotland for 78 years. One important part of school careers guidance is to emphasise to young people just how important one's personal interests and abilities are in a career. Young people seem to accept this and look for jobs that will match their interests and abilities. Second, Edinburgh pupils, unlike those in Shanghai, consider secure and stable employment as the second most important factor when choosing a career. This is probably related to the unemployment rate in Scotland which is about 11 per cent and which has become a serious social problem. Young people are therefore looking for employment stability. Third, Edinburgh pupils, again unlike Shanghai pupils, do not view job status as an important factor when choosing a career. This may be explained by the relationship between salary and job status in Scotland, in which high salary jobs normally also carry high job status. People earning high salaries also have good living condition. To respondents, salary might have included both job status and living conditions, which may be one reason for many young people in Edinburgh not considering job status important when choosing a career.

3. Pupils' top ten jobs in each secondary school year

Pupils were asked to write down their preferred jobs from the first year (S1) to fifth year (S5) of secondary school. This question aimed to explore pupils' preferred top ten jobs at the age of 13+, which is from S1 to S6 in Edinburgh, compared with from P6 to S3 in Shanghai. The results are shown in Table 5.2.

Table 5.2. Pupils' top 10 jobs in each secondary school year (in percentages)

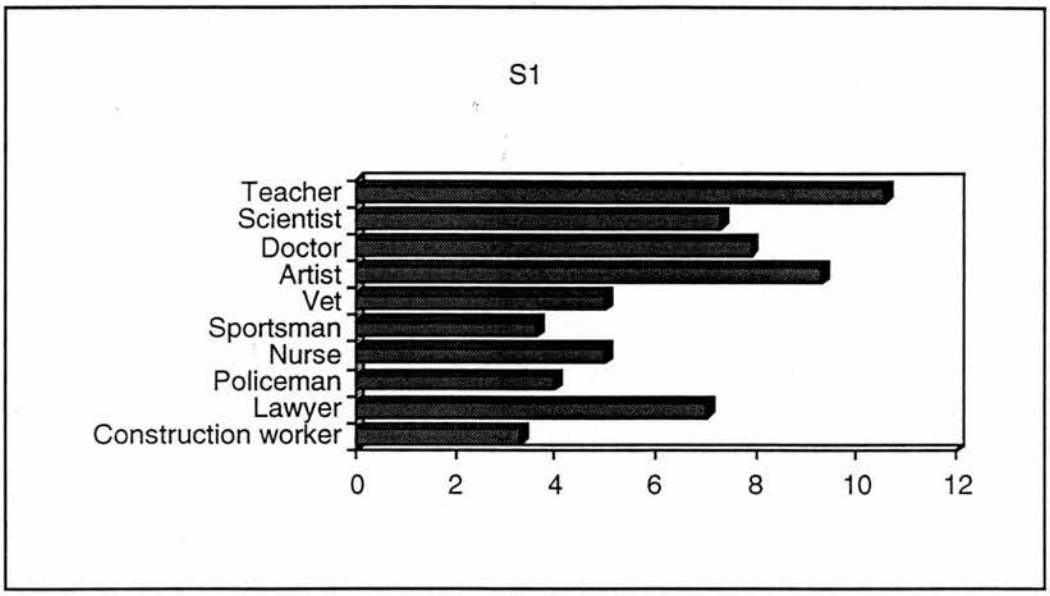
	S1	S2	S3	S4	S5
1	10.6	12.8	11.5	10.6	15.0
2	7.3	6.4	7.2	8.9	5.3
3	7.9	6.7	6.3	4.6	6.2
4	9.3	8.1	6.3	6.3	4.4
5	5.0	5.0			
6	3.6	4.0	5.3		
7	5.0	4.4	4.9	5.3	6.2
8	4.0				
9		7.0			
10	7.0	9.4	4.9	4.6	4.4
11	3.3	3.4	4.3	4.3	
12			3.9	6.6	5.3
13					5.3
14			4.6	4.6	5.3
15				6.3	5.3

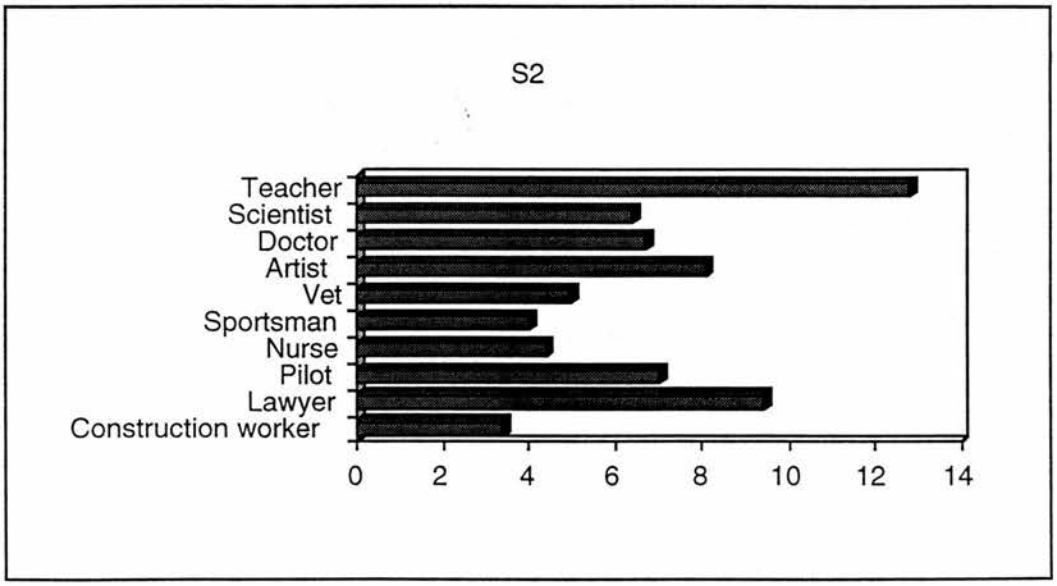
Notes

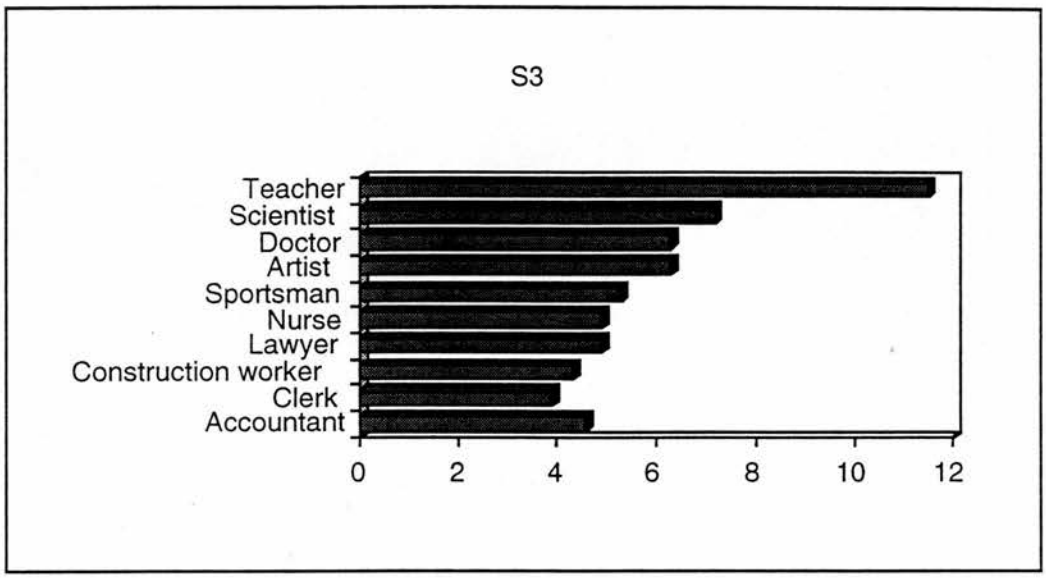
1 - Teacher
2 - Scientist
3 - Doctor
4 - Artist
5 - Vet
6 - Sportsman/ sportswoman
7 - Nurse
8 - Policeman/ policewoman
9 - Pilot
10 - Lawyer
11 - Construction worker
12 - Clerk
13 - Designer
14 - Accountant
15 - Architect

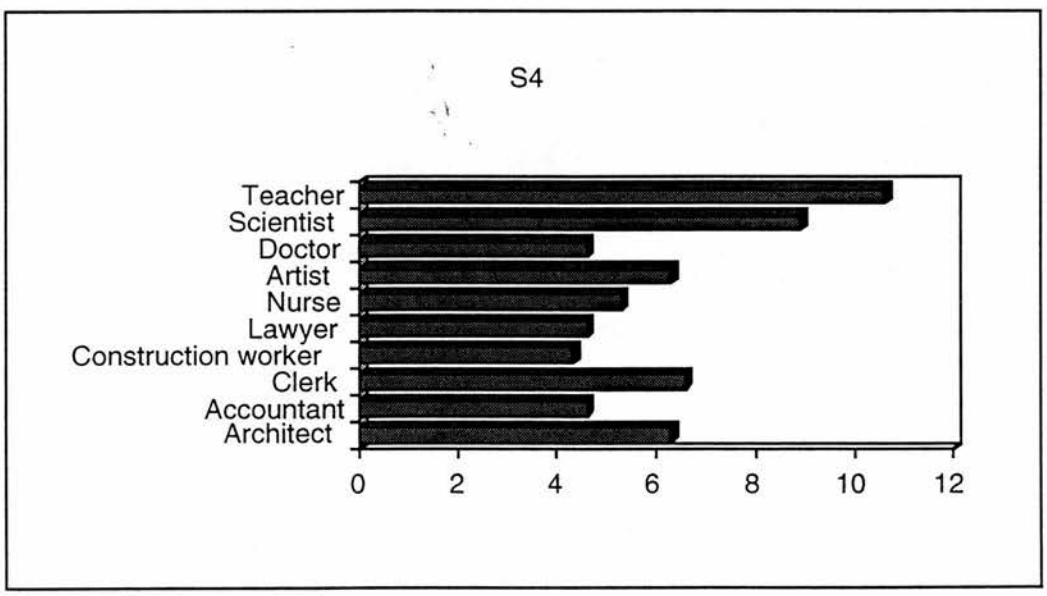
In order to clarify Table 5.2, the information has been charted in Figure 5.2 below.

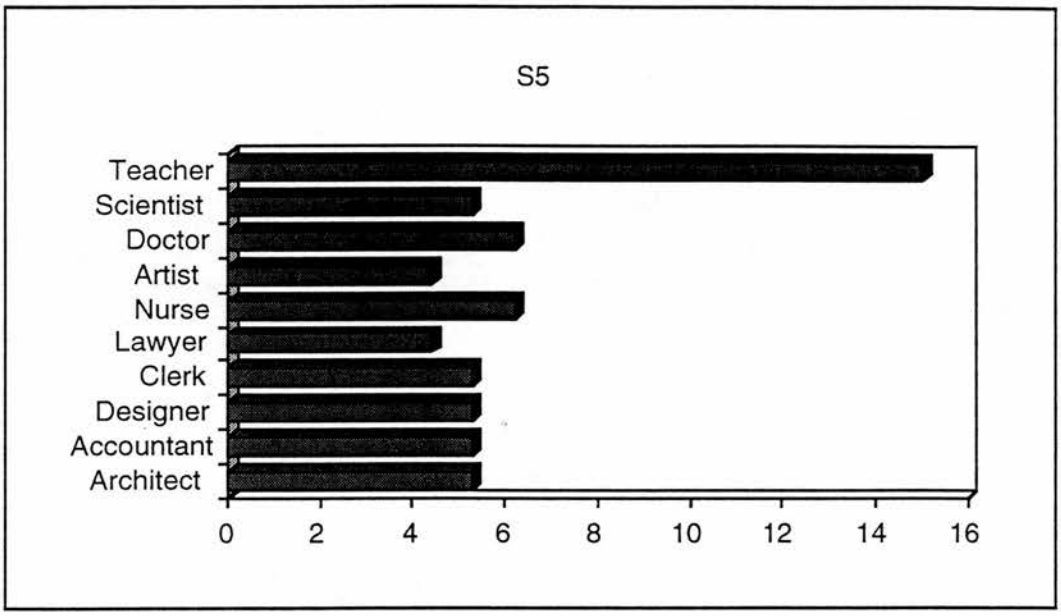
Figure 5.2. Pupils' top ten jobs in each secondary school year (in percentages)






S3
Teacher
Scientist
Doctor
Artist
Sportsman
Nurse
Lawyer
Construction worker
Clerk
Accountant
0
2
4
6
8
10
12


S4
Teacher
Scientist
Doctor
Artist
Nurse
Lawyer
Construction worker
Clerk
Accountant
Architect
0
2
4
6
8
10
12



The results show that six jobs - teacher, scientist, doctor, artist, nurse and lawyer - were listed among the top ten in each secondary school year. One job - construction worker - was listed among the top ten from S1 to S4.

Eight jobs were in some years listed among the top ten: policeman/policewoman, vet, sportsman/sportswoman, pilot/sailor, clerk, designer, accountant and architect.

Table 5.2 shows that the job of teacher came top in each school year, which was not the case in Shanghai. The jobs of scientist, doctor and nurse were popular throughout secondary school. As pupils advance at school, fewer choose to be artists (9.3 per cent in S1 against 4.4 per cent in S5).

Table 5.2 also shows that as pupils advance at school few want to be vets, sportsmen/sportswomen and pilots, while more want to be clerks, designers, accountants and architects.

Table 5.3 in Appendix 7 shows boys' and girls' top ten jobs in each secondary school year. Some preferred jobs featured in the top ten for both sexes, including teacher, artist, scientist, doctor and lawyer. However, there are distinct differences among the job preferences for boys and girls. Many boys want to be sportsmen, policemen, soldiers, construction workers, architects and technicians, while girls prefer to be nurses, childminders and hairdressers.

Table 5.4 in Appendix 7 shows the pupils' top ten jobs in three schools of different academic levels. In School A (low academic standard) the majority of pupils chose skilled (manual) occupations, such as construction worker, childminder, hairdresser and shop assistant. As pupils advanced at school, few chose high level jobs. A number of pupils in this school did not even want to enter employment. They said: "Why should we work considering our parents do not work? We are fine without jobs."[1] In School B (mixed academic standard) it is clear from Table 5.4 that the pupils' careers choices cover a wide range from doctor and lawyer to construction worker, childminder and hairdresser. In School C (high academic standard) pupils chose only high level jobs, such as doctor, scientist, lawyer, teacher and architect. Even within the same job type, such as artist, pupils with different academic achievements made different choices. For example. in the field of artist the less able pupils chose the careers of model and pop singer, while able pupils were more likely to choose photographer and actor/actress.[2]

These results may be explained by young people's academic achievements and their socio-economic classes, their gender, school culture and the local labour market. First, young people choose their careers according to their

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1 Personal interview with a careers officer at School A (low academic standard), on 19 March 1993.

2 Personal interview with a careers officer at School A (low academic standard), on 19 March 1993.

school academic achievements. Able pupils choose high level jobs while less able pupils choose low level jobs. Another reason might be pupils' socio-economic class. Furlong (Furlong, 1992, p. 120) found that people from middle-class families tend to have significantly higher occupational aspirations than young people from the working classes, irrespective of qualification. Social groups or status groups are made up of people who share a sense of status based on a common culture e.g. language, taste, manners, opinions, values, money (Napier University of Edinburgh, 1992g). The presence of such a culture may result in able pupils from working class families not choosing high level jobs.

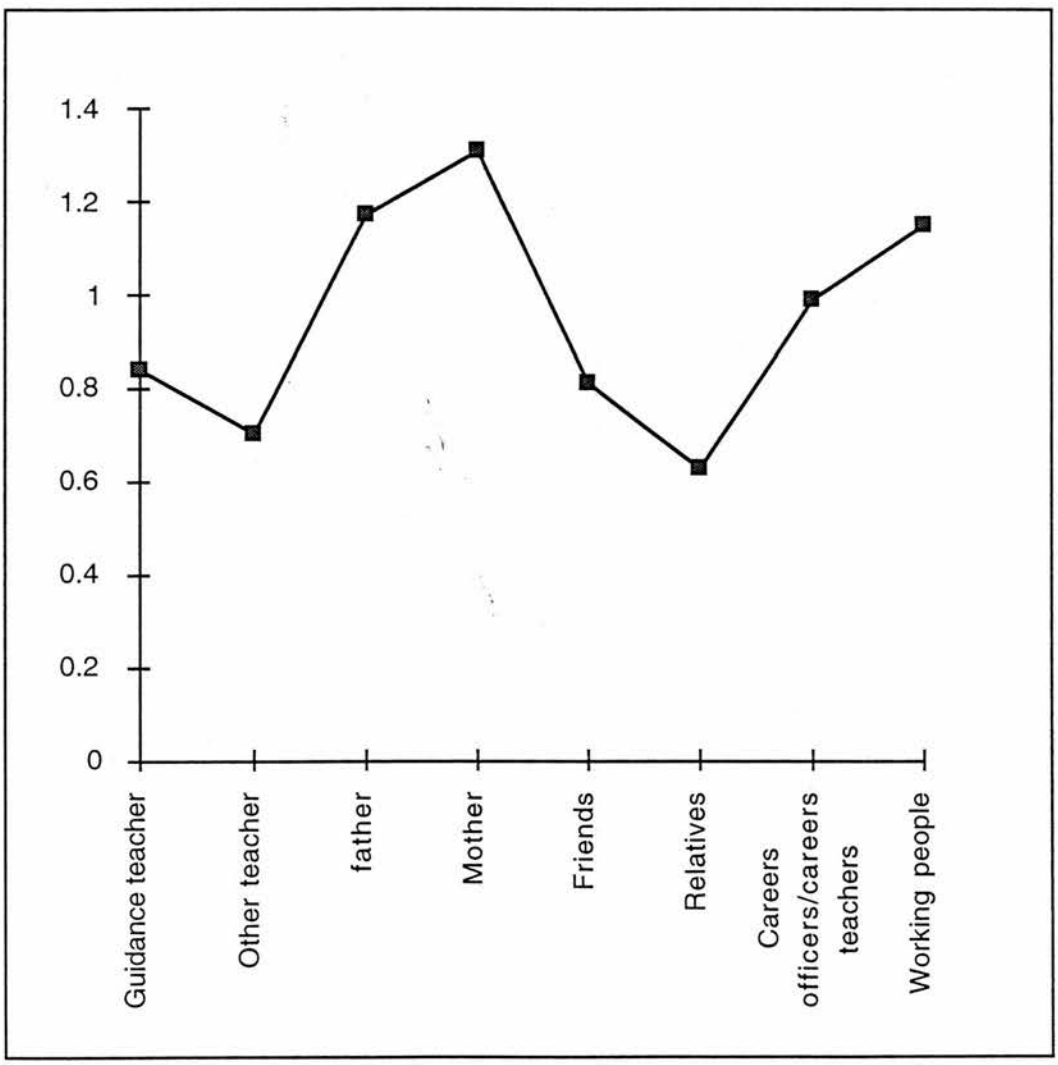
Second, gender influences pupils' occupational preferences. Boys tend to choose traditional male jobs, such as technician, construction worker and architect, while girls prefer traditional female jobs, such as nurse and teacher. Gender differences in occupational aspirations may reflect boys' and girls' experiences of distinct patterns of socialisation both at home and in society, and also the sexual segregation of the labour market. According to the statistics, in total women employees account for 55 per cent of the number of employees in the service sector, including education and nursing. This contrasts with the much lower share in manufacturing (30 per cent) and construction (12 per cent) (Napier University of Edinburgh, 1992c).

Third, pupils' occupational preferences reflect the local labour market and job opportunities. For example, the jobs of childminder and construction worker are popular in School A (low academic standard) in Edinburgh, but no young people in Shanghai would choose these two jobs. As young people in Shanghai have increasing freedom to choose their jobs, it is only young people coming from rural areas to Shanghai who are prepared to take this kind of hard job. In Edinburgh, because of the high competition for employment, some young people have to take this kind of job.

4. People from whom pupils get help in making careers decisions

The pupils were asked to rank the relative helpfulness of people when choosing a career, according to whether they were a lot of help, some help, no help or not applicable.

Figure 5.3. The mean of the people from whom pupils get help in making careers decisions



Notes: 2 = a lot of help 1 = some help 0 = no help

Figure 5.3 (the detailed data are in Table 5.5 in Appendix 7) shows the relative helpfulness of people when pupils come to choose a career. The pupils identified their mothers and fathers as their primary source of help. This result is the same as in Howieson's study, which found from surveying 5500 school leavers in Scotland that parents were, on average, considered by most young people as the most helpful source of careers guidance (Howieson, 1993). The second source of help was workers in an occupation, followed by careers officer or careers teacher.

The pupils were further asked whether they had got careers advice from their parents and careers officer/careers teacher. The results are shown in Table 5.6 below.

Table 5.6. The number of pupils who get careers advice from their parents or careers officers/careers teachers

Source of help	Frequency (f)	Percentage (%)
Parents	331	88.7
Careers officer or careers teacher	135	35.1

Table 5.6 reveals that 88.7 per cent of pupils get careers advice from their parents, while only 35.1 per cent get careers advice from careers officers or careers teachers.

The strong influence of parents on pupils' careers choices may have an important cultural source. Although careers officers and careers teachers are

experts in careers guidance they are often unavailable. In the two selected state schools in the survey, one careers officer visits one school only one day a week. Most pupils normally meet their careers officers only once for careers counselling in S4 during their secondary school years (see Chapter 8). Parents have more contact with their children and are usually trusted by them. They also have more work and social experience than their children, and feel a certain responsibility to help them choose a career. However, most parents do not have access to a wide range of up-to-date careers information and they lack the skill for careers guidance. Nevertheless, careers guidance cannot be successful without parental support.

5. Analysis of variables that influence pupils' higher education expectations and careers level and type choices

In order to explore the factors that influence young people's careers choices, pupils were asked to write down whether they planned to enter higher education, and which job realistically, they would like to do. They were also asked to write down their school, gender, exam attendance and results, and parents' jobs and qualifications.

The jobs that pupils chose and parents' jobs were sorted out into six categories according to the occupational levels given by *British Standard Occupational Classification* (Government Statistical Service, 1991). These six job levels are ranked from high to low: professional, managerial and technical, skilled (non-manual), skilled (manual), partly skilled, and unskilled (see Chapter 4). The jobs were also categorised according to Holland's six occupational types: "realistic", investigative, social, enterprising, artistic, and conventional (see Chapter 4).

The statistical method of Logistic Regression was then employed to analyse the relationship between pupils' higher education expectations, the level and type of their careers choices, and some other factors, including school, gender, study achievements (exam attendance and results at standard grade), parents' qualifications, and parents' job levels and types.

From the returned questionnaires, most of the respondents had not received exam results by the time of the survey in May 1993, as these were not due until July. Because the survey was anonymous pupil's exam results were unavailable. Although all respondents answered the questions about what standard grades they had sat, the subjects varied from pupil to pupil. Only two courses, English and Maths, were required for all pupils. It was considered to use these two courses as representative of pupils' study achievements. In order to gage the success rate of pupils sitting English and Maths Standard Grades the author communicated with the Scottish Examination Board and three selected schools. It was found that over 95 per cent of pupils sat and passed their standard level exams in English and Maths from 1992 to 1994. So there is a high correlation between presentation and passes in English and Maths at Standard Grade.

Standard Grade has three levels of question paper: foundation, general and credit. Some pupils are encouraged to attempt two adjacent levels, such as foundation/general and general/credit.

In order to compute pupils' exam attendance for English and Maths in logistic regression, the following points system was used: one point was given for a foundation, two for a foundation/general, three for a general, four for a general/credit and five for a credit.

Factors influencing pupils' higher education expectations

Table 5.7 below shows that most pupils had clear ideas whether they planned to enter higher education or not. Fifty one per cent of pupils planned to enter higher education, while 24.1 per cent did not.

Table 5.7. Frequencies of pupils' higher education expectations

	Frequency (f)	Percentage (%)
Planning to enter higher education	186	51.0
Not planning to enter higher education	88	24.1
Don't know	91	24.9

Table 5.8. Factors that influence pupils' higher education expectations (crosstabulation)

Covariates	P-value	Significance	Number
School	0.00000	high	274
Sex	0.21014	none	272
Academic achievements	0.00000	high	248
Father's job level	0.00000	high	236
Mother's job level	0.00000	high	214
Father's qualifications	0.00618	high	140
Mother's qualifications	0.00512	high	149

Table 5.9. Logistic regression analysis of factors that have the most significant influence on pupils' higher education expectations

Covariates	P-value	Number
Academic achievements	0.000	86
Mother's job level	0.000	86

Table 5.10. The relationship between mother's job level and father's job level

	Mother's job level	
	P-value	Number
Father's job level	0.00000	263

Table 5.8 indicates that there was a highly significant correlation between pupils' higher education expectations and their school, academic achievements, parents' job level and qualifications. However, there was no correlation between pupils' higher education expectations and gender.

Table 5.9 shows that pupils' academic achievements are the most important factor, followed by mother's job level. Table 5.10 reveals that there is a high correlation between mother's and father's job level: the higher a mother's job level, the higher the father's.

Pupils higher education expectations are first decided by their school academic achievements and then by their parents' job level. This result may be in direct relation to the enrolment policies of universities and colleges, residential area and family and socio-economic background. First, as in China, universities and colleges choose their pupils mainly on the basis of their results in standard exams. A pupil's study achievements are the most important factor, determining whether or not he/she is able to enter college or university.

Second, unlike the situation in Shanghai, parents' job levels affect their children's higher education expectations in Edinburgh. In Edinburgh, parents with high level jobs can often afford to pay fees for their children to enter private schools, where there are usually better teaching facilities. The majority of pupils at private schools gain good exam results and many enter

university. In School C (high academic standard), all pupils had to pass an exam to get in. So the pupils' academic level was higher than at state schools. Discipline was strict and teaching facilities excellent. During the questionnaire survey all the pupils sat quietly and answered the questions in detail. Pupils seemed to respect their teachers, as they do in key-point schools in Shanghai.

However, the situation in School A (low academic standard) was totally different. This school was located in a council housing area, where about 70 per cent of parents were unemployed or 25 per cent did skilled (manual), partly skilled or unskilled jobs, such as construction worker and cleaner.[3] During the questionnaire survey, two guidance teachers helped the present writer manage the survey in two classrooms. In one classroom, a few pupils were very badly behaved and the teacher told me how difficult his work was. Pupils' exam results in this school were much poorer than those of pupils in private and good state schools.

Researchers have found that pupils' ability, family background, residential area and home neighbourhood affect their educational attainments (Garner, 1989a; Garner, 1989b; Garner and Raudenbush, 1991). This survey confirms that pupils' academic achievements are the most important factor in pupils' higher education expectations. Parents' job level also plays an important role because it determines the family income and the residential area, which then decides which type of school their children can attend. Pupils' academic achievements are influenced by the type of school they attend and by study circumstances.

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3 Personal interview with a careers officer at School A (low academic standard), on 19 March 1993.

Factors influencing pupils' job level expectations

The jobs which pupils expected to do were sorted out into six categories according to the occupational levels given by the *British Standard Occupational Classification* (Government Statistical Services, 1991). These six job levels rank from high to low: professional, managerial and technical, skilled (non-manual), skilled (manual), partly skilled, and unskilled (see Chapter 4, part 5).

Figure 5.4. Pupils' job level expectations

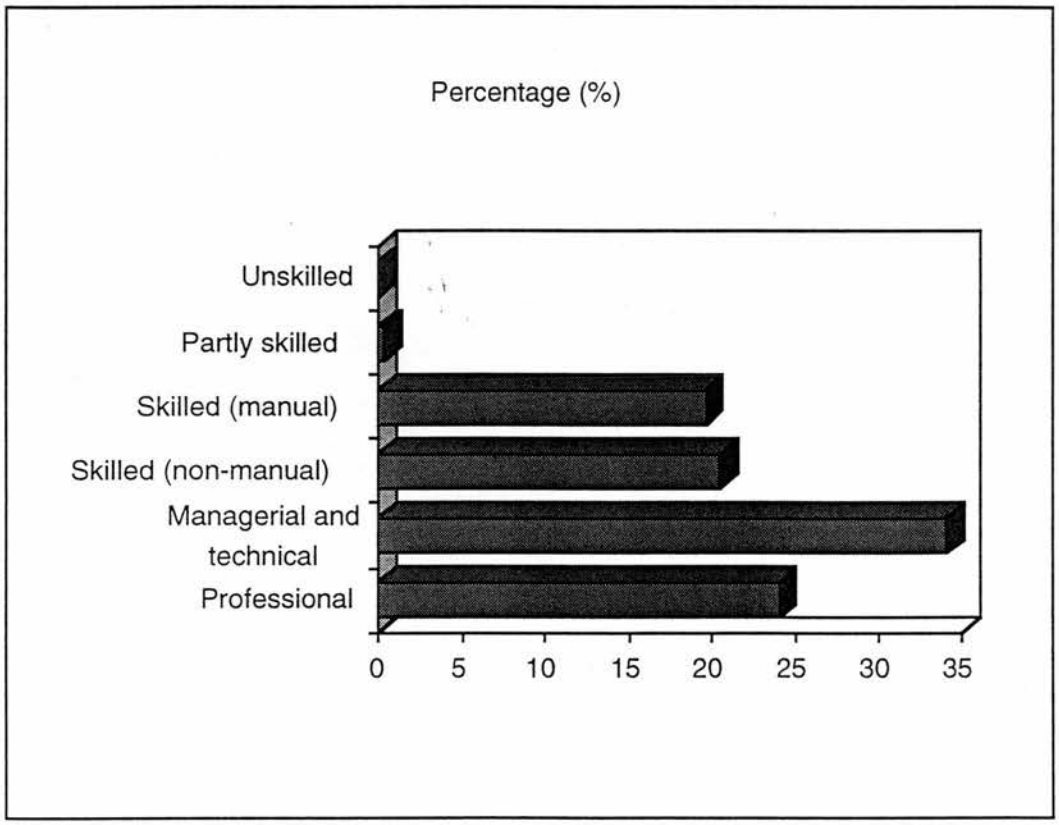


Figure 5.4 (the detailed data can be seen in Table 5.11 in Appendix 7) shows that the majority of pupils chose the first four job levels. Only 1 (0.3 per cent) pupil chose a partly skilled job, 5 (1.5 per cent) chose unskilled jobs, and 4 (1.2 per cent) did not want to have a job. Because the percentage choosing these levels was so low, they could not be analysed.

Table 5.12. Factors that influence pupils' job level expectations (crosstabulation)

Covariates	P-value	Significance	Number
School	0.00000	high	327
Sex	0.00005	high	326
Academic achievements	0.00000	high	299
Father's job level	0.00000	high	287
Mother's job level	0.00000	high	258
Father's qualifications	0.07390	none	167
Mother's qualifications	0.33368	none	168

Table 5.13. Logistic regression analysis of factors that have the most significant influence on pupil's job level expectations

Covariates	P-value	Number
Mother's job level	0.000	123
Father's job level	0.003	123

Table 5.12 shows that pupils' job level expectations have a highly significant correlation with their school, gender, study achievements and parents' job level.

Table 5.13 shows that parents' job level is the most important factor in pupils' careers choices: the higher the parents job level, the higher their children's job level expectations.

Parents' job level influences the kind of school their children attend. In turn, the type of school attended affects pupils' academic achievements, which eventually determine pupils' future careers level choice. Therefore, although pupils' job level choices have a high correlation with school type attendance and academic achievements, parents' job level is the most decisive factor in pupils' job level expectations.

Interestingly, unlike Shanghai pupils, gender is also a factor which influences pupils' careers level choices. Table 5.14 in Appendix 7 shows that the main difference of job level choices between boys and girls is that more boys choose skilled (manual) jobs (29.5 per cent, as against 9.6 per cent of girls) and more girls choose managerial and technical occupations (42.8 per cent, as against 25.3 per cent of boys). This may be because the range of pupils' careers choices is very narrow, being limited mostly to ten occupations (see Chapter 8). Many girls choose to be teachers, which can be termed a managerial job, while a lot of boys choose to be construction workers, which falls into the skilled (manual) job category. However, there is no significant difference in other occupational level choices between boys and girls.

Factors influencing pupils' job type expectations

The jobs which pupils expected to do were categorised according to Holland's six occupational types: "realistic", investigative, social, enterprising, artistic and conventional (see Chapter 4).

Table 5.15. Factors that influence pupils' job type expectations (crosstabulation)

Covariates	P-value	Significance	Number
School	0.00000	high	332
Sex	0.00000	high	331
Academic achievements	0.00002	high	304
Father's job type	0.00011	high	289
Mother's job type	0.14639	none	260
Father's qualifications	0.39391	none	167
Mother's qualifications	0.69423	none	169

Table 5.16. Logistic regression analysis of factors that have the most significant influence on pupils' job type expectations

Covariates	P-value	Number
Sex	0.000	151
School	0.000	151
Academic achievements	0.035	151

Table 5.15 shows that pupils' job type expectations have a high correlation with the type of school attended, gender, academic achievements and father's job type.

Table 5.16 shows that gender is the most influential factor when pupils choose an occupation, followed by the type of school attended and academic achievements.

Table 5.17. Boys' and girls' job type expectations (in percentages)

Type	Boys	Girls
Realistic	34.3	7.9
Investigative	10.2	9.7
Social	16.3	38.2
Enterprising	15.7	18.2
Artistic	9.0	11.5
Conventional	14.5	14.5

It is interesting to explore how gender influences pupils' job type choices. It can be seen from Table 5.17 above, as with Shanghai pupils, that more boys choose "realistic" type jobs (17.2 per cent, as against 3.9 per cent of girls), while more girls choose social type jobs (19.0 per cent, as against 8.2 per cent of boys). There was no significant correlation between the pupils' other careers type choices (investigative, enterprising, artistic and conventional type). This may be explained by tradition: girls tend to work in social type jobs, such as teacher, nurse and childminder etc., whereas boys tend to work in "realistic" type jobs, such as technician and construction worker.

Table 5.18. Pupils' job type expectations in three schools (in percentages)

Type	School A (low academic standard)	School B (Mixed academic standard)	School C (high academic standard)
Realistic	38.9	25.8	10.3
Investigative	1.9	2.3	19.9
Social	25.9	28.8	26.7
Enterprising	1.9	9.8	28.8
Artistic	14.8	15.9	3.4
Conventional	16.7	17.4	11.0

Pupils' academic level (type of school attended and academic achievements) is the second greatest influence on pupils' job type expectations. Table 5.18 above shows that pupils in School C (high academic standard) tend to choose investigative type jobs [19.9 per cent, as against 2.3 per cent in School B (mixed academic standard) and 1.9 per cent in School A (low academic standard)] and enterprising type jobs [(28.8 per cent in School C (high academic standard), 9.8 per cent in School B (mixed academic standard) and 1.9 per cent in the school A (low academic standard)]. Pupils in schools with a low academic standard choose "realistic" type jobs [(38.9 per cent, as against 25.8 per cent in School B (mixed academic standard) and 10.3 per cent in School C (high academic standard)].

As previously described, over 95 per cent of pupils passed their standard level exams in English and Maths from 1992 to 1994. In order to explore how pupils' academic achievements influence their job type choices the pupils' exam attendance (English and Maths) was computed into three levels: low, middle and high. The method of computing was as follows: one point was given for a foundation, two for a foundation/general, three points for a general, four for a general/credit and five for a credit. Low level was given if a pupils' total points were less than or equal to 4; middle level for totals of 5 to 7 points, and high level for totals of 8 to 10 points.

The results are similar to those for the relationship between pupils' job type expectations and school type attendance. They indicate that more able pupils choose investigative type jobs (14.7 per cent, as against 6.0 per cent of middle level pupils and 0 per cent of less able pupils) and enterprising type jobs (23.7 per cent, as against 8.4 per cent of middle level pupils and 3.2 per cent of less able pupils). Less able pupils tend to choose realistic type jobs (41.9 per cent, as against 27.7 per cent of middle level pupils and 13.7 per cent of able pupils).

Therefore, the type of school attended and academic achievements affect whether pupils choose investigative and enterprising or "realistic" type jobs. This may be explained by the narrow range of pupils' careers considerations. Each type of job includes different job levels. For example, "realistic" type jobs include both high and low level jobs like engineer and technician on the one hand, and construction worker on the other. But few pupils from the survey chose high level jobs of the "realistic" type, such as engineer. Many less able pupils chose to be construction workers, which fall in the type "realistic". Many able pupils chose the jobs of doctor, scientist, manager and businessman/businesswoman, which belong to the investigative and enterprising types. Few pupils chose low level jobs of the investigative and enterprising type, such as lab assistant and warehouse manager. This may explain why more able pupils' job type expectations fall into investigative and enterprising types and those of less able pupils into the realistic type in this survey.

It was found that only 3 pupils planned to do exactly the same jobs as their fathers. Two of them intended to take over their father's business, and one wanted to be a doctor like his father. However, as can be seen from table 5.15, some pupils wanted to do jobs of the same type as those of their fathers.

The relationship between father's job type and pupil's job type expectations appeared only within two job types: "realistic" and social. 13.1 per cent of pupils chose "realistic" type jobs and 10.7 per cent chose social type jobs. These choices matched their fathers' job types, and were perhaps made because these pupils tended to know about their fathers' jobs. Some may even have helped their father at work, causing them to think about the job (Hodkinson, 1994a). In addition to this, it may be the case that pupils understand both favourable and unfavourable aspects of their father's jobs

better than those of other jobs. The difficult aspects of their fathers' jobs may discourage pupils from choosing the same job as their fathers.

6. The changing process of pupils' career aims during the secondary school years

Pupils were asked to write down their preferred occupations from S1 to S5. The results are presented in Figure 5.5 below.

Figure 5.5. The change in pupils' job level aims

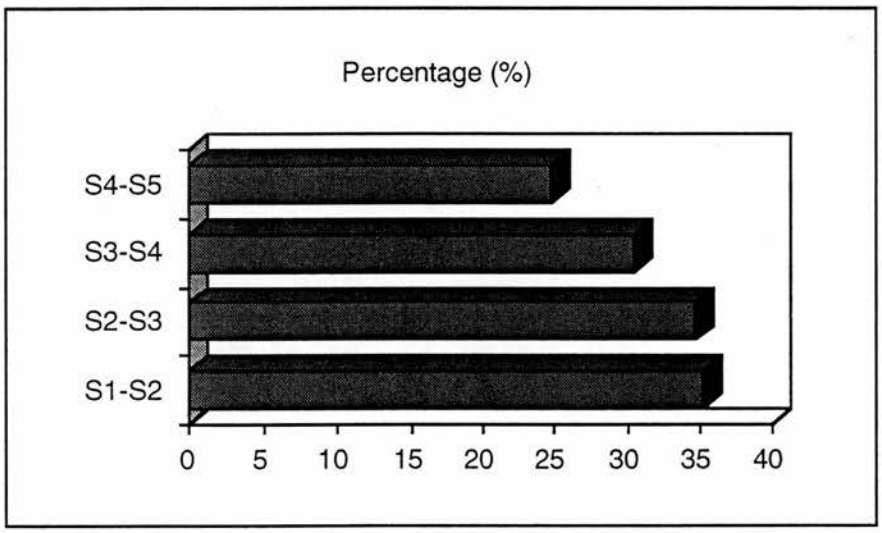


Figure 5.6. The change in pupils' job type aims

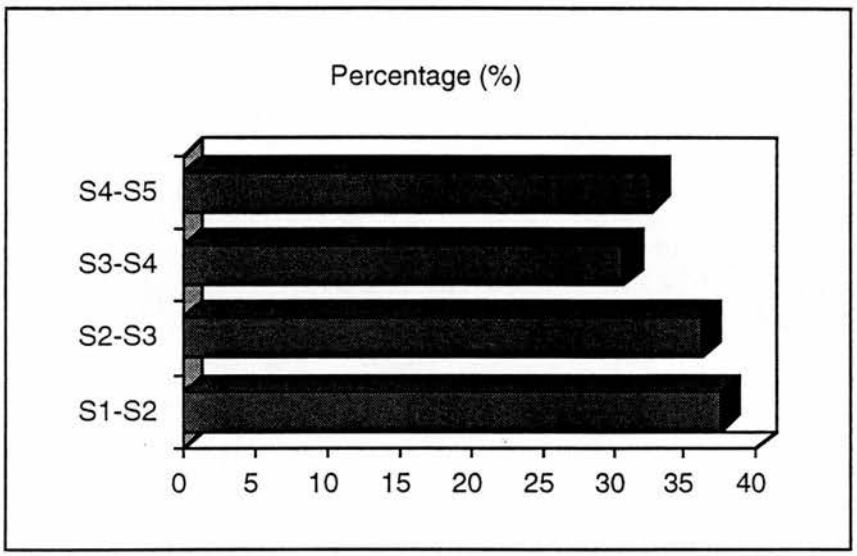


Figure 5.5 (the detailed data can be seen in Table 5.19 in Appendix 7) shows that many pupils changed their job level aims during their secondary school years (35.2 per cent from S1 to S2; 34.7 per cent from S2 to S3; 30.5 per cent from S3 to S4; 24.8 per cent from S4 to S5).

Figure 5.6 (the detailed data can be seen in Table 5.20 in Appendix 7) shows that many pupils changed their job type aims during their secondary school years (37.5 per cent from S1 to S2, 36.2 per cent from S2 to S3, 30.7 per cent from S3 to S4 and 32.6 per cent from S4 to S5).

It is clear from Figures 5.5 and 5.6 that the percentage of pupils changing their career aims does not change radically between different school years.

In each school year many pupils undergo a great change of careers aim, not only within the same job level and type but also from one level or type to another. This may mean many pupils require more careers guidance at school (see Chapter 8).

7. The changing value of career aims during the secondary school years

Pupils often change their career aims during their secondary school years. It is interesting to explore how great this change is in the different secondary school years.

Figure 5.7. The maximum changing values of pupils' job level aims

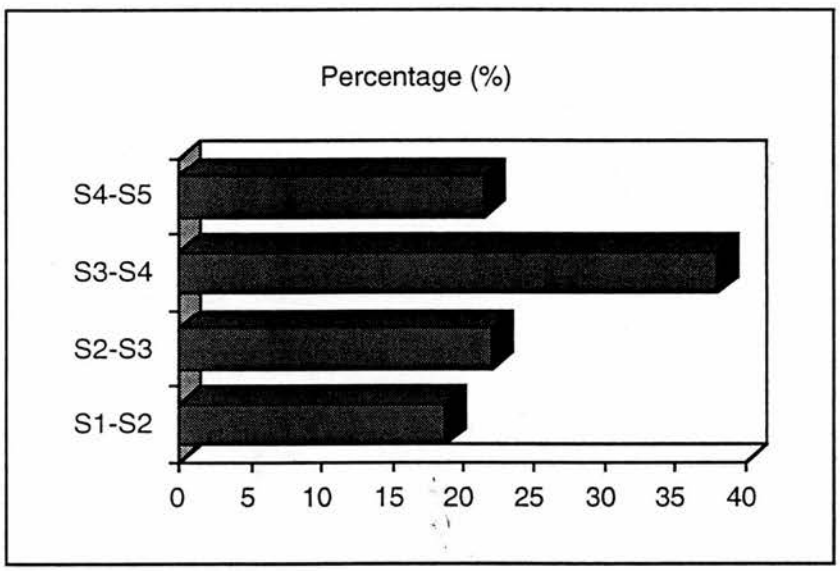
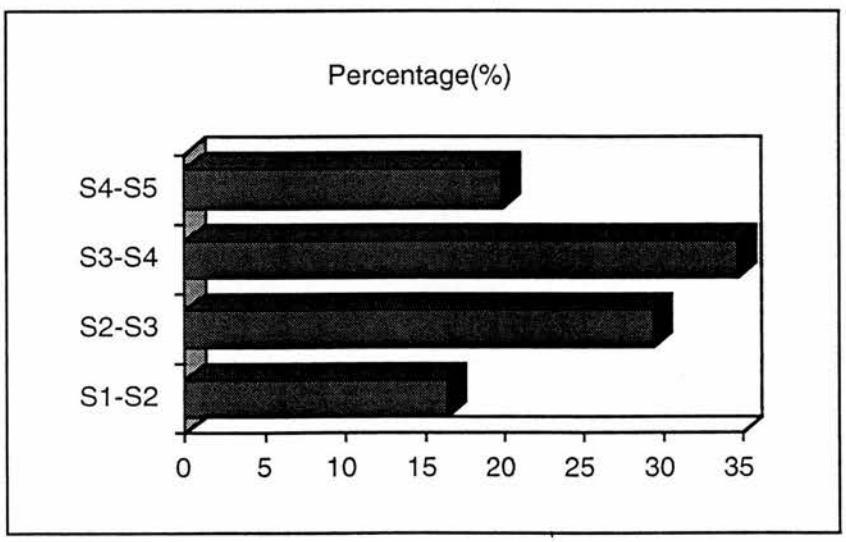


Figure 5.8. The maximum changing values of pupils' job type aims



Figures 5.7 and 5.8 (the detailed data can be seen in Tables 5.21 and 5.22 in Appendix 7) show that the greatest change in career aims takes place between S3 and S4, followed by between S2 and S3. This may be explained by pupils' subject choices in S2 and careers choices in S4. Pupils have to choose their S3 and S4 subjects at the end of S2, and this choice is related to their future career. Pupils can only choose one course from geography and history, one course from biology, chemistry, physics and science and therefore immediately lose the opportunity to study several subjects in one field. Young people have to choose further education or training, or a job, when they arrive at S4 (at the age 16) (see Chapter 1).

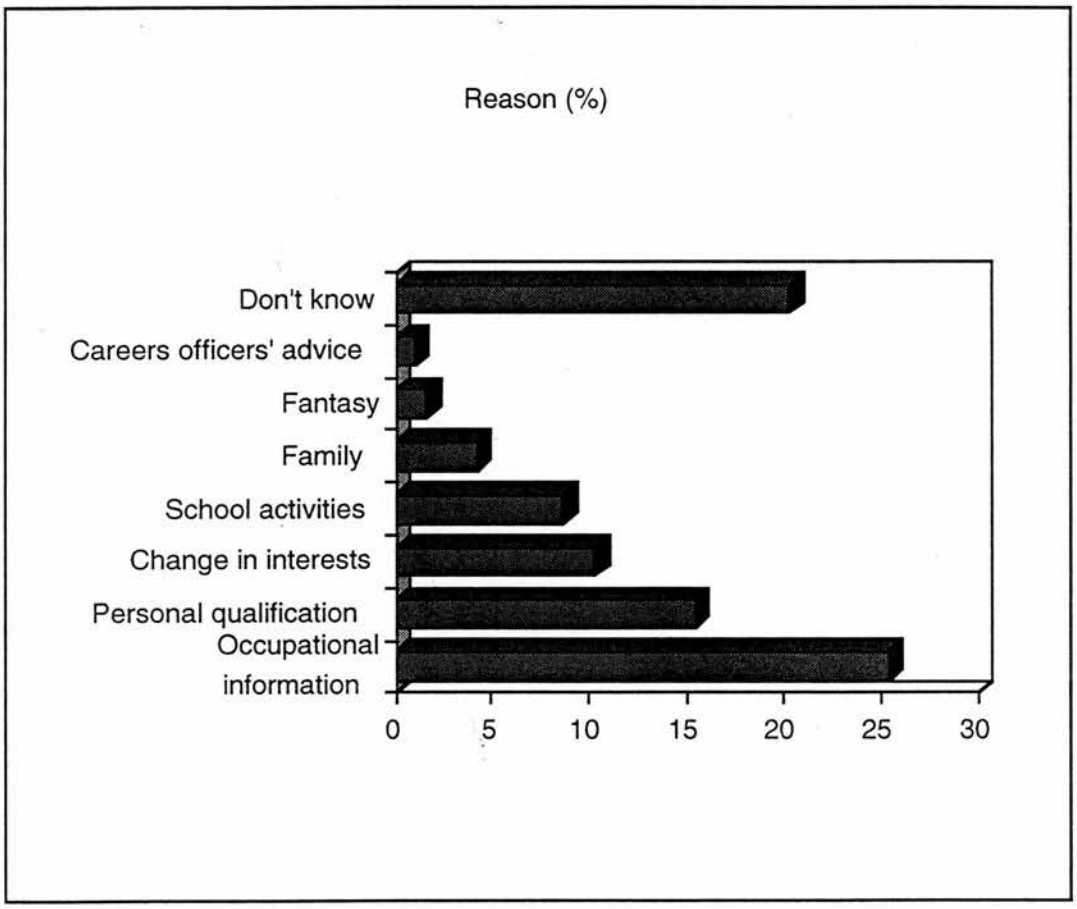
Table 5.21 in Appendix 7 shows that 18.6 per cent of pupils make their biggest change of careers aim between S1 and S2. After S2 these pupils' career aims remain relatively stable. These pupils may need careers help to set up wise careers plans as early as S1 because they cannot get enough accurate careers information and understand their own vocational interests and abilities without the help of careers guidance providers. Young people need careers guidance to develop their careers plans over a period of time, particularly because it is difficult for young people to make a radical change in their career aims when facing a careers choice in S4. In the light of the fact that most young people's career aims undergo their greatest change during the secondary school years, schools should consider seriously the need to provide them with adequate careers help.

8. Reasons why pupils change their career aims during their secondary school years

Pupils were asked to write down the reasons why they changed their career aims. Figure 5.9 below (the detailed data can be seen in Table 5.23 in

Appendix 7) shows the reasons why pupils change their occupational aims. Many (25.4 per cent) do so because they have accumulated information about work conditions, salaries, job opportunities and work requirements.

Figure 5.9. Reasons why pupils change their career aims (N=311)



Young people's personal factors, such as qualifications and interests, cause pupils to change their careers plans (25.7 per cent). These personal factors indicate whether or not a young person is suitably qualified for a certain job, and whether or not he or she will gain satisfaction from it.

Some young people relate their experience of school activities to their career aims (8.7 per cent). Such activities include involvement in clubs, such as music and sports, and in the course on "life and work", young people are given a chance to explore vocational interests and abilities.

Some pupils want to follow their parents' advice on jobs (4.2 per cent), and a few accept careers officers' advice (1.0 per cent). 1.6 per cent of pupils think that their choice of career is influenced by films and books. However, a large number of young people (20.3 per cent) change their career aims without being clearly aware why.

These results show that young people take into account several considerations when choosing a career. These include personal factors (interests and qualifications), job factors (careers information accumulation), school factors (personal experience and activities) and family.

It is a long process for pupils to get to know themselves and different occupations. For example, they see their academic achievements (qualifications) measured by exams, and their abilities through school activities. They gather job information through careers visits, talking with people working in an occupation and work experience. Many treat their parents as careers advisers.

9. Summary and discussion

Summary

The criteria for choosing a career are coloured by school careers intervention, the local economy, culture and tradition. Young people first consider their individual development (personal interests and ability) when choosing a

career, which is influenced by school careers intervention. Because of the serious problem of unemployment in Scotland young people seek careers that will offer secure and stable employment. Job status/prestige is not considered an important single criterion. This may be explained by the fact that salary is related to both living conditions and job status.

Young people's occupational preferences are influenced by their age, gender, academic achievements and the local employment opportunities. Some young people are influenced by fantasy when they choose jobs such as pilot and artist, but as they grow up their career aims become more realistic. Girls tend to choose traditional female jobs, such as teacher and nurse, and boys choose traditional male jobs, such as technician. Less able pupils tend to choose low level jobs, such as construction work and childminding. Able pupils consider high level jobs, such as doctor and lawyer. Young people's careers choices focus on local employment opportunities, and if, for example, there are vacancies for construction workers or childminders, many Edinburgh pupils will accept such jobs.

Although parents are the most consulted source of help for young people choosing a career, their advise does not seem to have a strong influence on their children's career choice.

Young people's higher education expectations are influenced by the type of school they attend, their academic achievements, parents' job level and qualifications, but not by their gender. Among these factors, academic achievements are the most important because these determine a pupil's entry into higher education.

Pupils' job level expectations are influenced by the type of school they attend, their gender, academic achievements and parents' job level. Among these factors parents' job level is the most important, followed by the type of school

attended and by academic achievements. This is because parents' job level determines the family income and residential area, which in turn influences the type of school their children attend. School characteristics, family background and residential area may all influence pupils' academic achievements, which determine their future job level choice. Therefore, these three factors are closely related.

Pupils' job type expectations are influenced first by gender, then by the type of school attended, and finally by their academic achievements and their father's job type.

Gender has an influence on whether pupils choose "realistic" or social type jobs, but seems to have little effect on other job type choices. Boys tend to choose "realistic" type jobs while girls prefer social type jobs. Able pupils tend to choose investigative and enterprising type jobs, while less able pupils choose "realistic" type jobs.

If a father's job belongs to the "realistic" or social type, his child may tend to look for a similar type of job, although not necessarily precisely the same job. For example, if a father is a construction worker, his child may want to be a technician.

In each secondary school year one-third of pupils change their career aims. Careers guidance should start from S1 in order to meet pupils' careers needs.

About one-third of pupils make their biggest change of career aims from S3 to S4, although each secondary school year witnesses changes for many pupils.

(9) The reasons why pupils change their career aims are highly individual. There are four main reasons: personal factors, occupational information, school and family. A young person's careers choice is part of a process as each person gets to know him or herself and the world of work gradually through

study, activities and personal experience at school, in society and with their family.

Discussion

Matching model

This survey supports matching model that personal interests and ability are the most important factors in young people's careers choices. Matching personal interests and ability with job requirements is an important aspect of careers guidance.

However, this study points to several shortcomings of the matching model. Firstly, one's interests and abilities are continually developing. Many people in this survey changed their career aims as their interests and abilities changed, and as they accumulated careers information.

Secondly, young people's careers choices are influenced not only by their personal characteristics, but also by their socio-economic class, family, school and society.

Personality type model

This survey does not examine Holland's personality type classifications. It only uses Holland's categories to explore pupils' changes of careers aim. A very important factor highlighted in this study is that of gender; an aspect which Holland's model neglects. Boys and girls make different careers choices in both type and level. Secondary school pupils' careers choices reflect a changing process and are very unstable. It is therefore doubtful whether Holland's model could be applied effectively in the case of secondary school pupils.

Developmental model

The survey contradicts Super's model of distinct stages of careers development: fantasy (4 -10), interest (11 -12), capacity (13 -14), tentative (15 -17), and transition (18 -21). The survey reveals on the contrary that choosing a career is a highly individual process. These young people (15 - 18 years old) change their career aims for different reasons. A few of them are still at the fantasy stage (1.6 per cent), while a number are at the interest and capacity stages. A lot of them change their career aims as they accumulate careers information, while some of them consider their qualifications and job opportunities. Moreover, 20.3 per cent of pupils change their career aims without clear ideas. Therefore, in Edinburgh as in the Shanghai survey, no distinct careers development stages have been found. In contrast, careers choices are decided by many factors and differ from one pupil to another.

Opportunity structure model

This survey supports opportunity structure model that school academic standards, and family and socio-economic class are major factors influencing young people's higher education and job level expectations.

However, some different and additional conclusions emerge from this survey. Firstly, gender is an influential factor in pupils' job choices, especially their choice of job type, a point that is not included in opportunity structure model. Secondly, pupils start to formulate their career aims at an early stage. Their career aims and choices change with their experiences at school, and within the family and society. School careers intervention plays an important role in helping them establish suitable career aims.

Combination model

The results of this survey support combination model that personal interests, ability and community needs are all important factors in pupils' careers choices, but point to young people's careers choices being much more complicated than combining model supposed: careers choice is a highly individual process which is influenced by an interplay between school careers intervention, society, family, socio-economic class, academic achievements and gender.

Chapter 4 explored pupils' experiences and perception of careers choices in Shanghai and examined five careers guidance models. Chapter 5 has studied the same topics in the context of Edinburgh. It is interesting to use these survey results, through comparative studies, to examine pupils' careers choices and further to evaluate careers guidance models in the setting of Shanghai and Edinburgh.

Chapter 6 will compare the results of the surveys in Shanghai and Edinburgh.

CHAPTER 6

A COMPARATIVE ANALYSIS OF PUPILS' EXPERIENCE AND PERCEPTION OF CAREERS CHOICES IN SHANGHAI AND EDINBURGH

Chapter 6: A Comparative Analysis of Pupils' Experience and Perception of Careers Choices in Shanghai and Edinburgh

1. Introduction

Chapters 4 and 5 have displayed and analysed the results of the survey that was conducted in Shanghai and in Edinburgh. This chapter will use the results of the survey, through a comparative study in the context of Shanghai and Edinburgh, to examine the five main careers guidance models: the matching model, the personality type model, the developmental model, the opportunity structure model and the combination model. The comparative study will include criteria for choosing a career, occupational preferences, the factors that influence pupils' higher education expectations and careers choices, and the changing process of and reasons for careers aims during secondary school years.

2. Pupils' criteria for choosing a career

Pupils in both Shanghai and Edinburgh regard personal interests and the possibility of exercising their abilities as the most important factors when choosing a career. This suggests that pupils see work as a means of advancing personal development and providing personal fulfilment. It indicates that young people have accepted school careers guidance ideas and have chosen careers that should match their personal interests and abilities. Moreover, pupils in both Shanghai and Edinburgh regard salary as an important factor (this ranks third for Shanghai pupils and fourth for Edinburgh pupils). This

shows that young people not only consider their personal characteristics, but also think about what jobs can offer when choosing a career.

However, there are some significant differences between the ways in which pupils in Shanghai and Edinburgh make their careers choices. First, Edinburgh pupils are more concerned about job security and stability than Shanghai pupils (this ranks third for Edinburgh pupils and seventh for Shanghai pupils). This result may be due to the problem of unemployment, which is about 11 per cent in Edinburgh. Although the percentage of unemployment in China has reached 2.9 per cent, unemployment is not a big problem for young people in Shanghai. Shanghai is an international business city and job opportunities are much greater than in other areas. All young people in Shanghai are privileged to have jobs in the Shanghai area (secondary school leavers in other areas are normally not allowed to take skilled jobs in Shanghai, except hard jobs such as construction worker, baby-sitter and cleaner). In fact, all young people in Shanghai have some freedom to choose their jobs.

Second, Shanghai pupils are more concerned about job status than Edinburgh pupils. This may be explained by the special local situation. In China the family is a very important social and economic unit. Each family member can influence the social prestige of the entire family. Under the "one family, one child policy", young people seek high status jobs to try and win honour for their families. In Edinburgh, unlike Shanghai, salary usually reflects job level and status. People with a high status job normally do not have a poor salary. Salary in Edinburgh terms may therefore encompass both job status and life style. This may be a reason why Edinburgh pupils do not regarded job status as an important factor when choosing a career.

3. Pupils' top ten jobs in each secondary school year

Fifteen jobs are listed by both Shanghai and Edinburgh pupils among the top ten jobs in all secondary school years. Among these fifteen jobs, eleven are listed among the top ten by pupils in both Shanghai and Edinburgh. These jobs are teacher, scientist, doctor, artist, sportsman/sportswoman, policeman/policewoman, pilot, lawyer, clerk, designer, accountant.

However, pupils in Shanghai and Edinburgh display different occupational preferences. First, as pupils in Shanghai advance at school, fewer and fewer are interested in becoming teachers, which is different from Edinburgh pupils. In the first year of secondary school many Shanghai pupils would like to be teachers (22.8 per cent), but by S3 few want to be teachers. More than 10 per cent of Edinburgh pupils want to be teachers in each secondary school year (10.6 per cent in S1 and S4, 15.0 per cent in S5). This situation may be explained by the fact that in China the job of teacher is no longer financially rewarding. The income of teachers is falling continuously, although teachers still have to work hard. This situation discourages many young Chinese from becoming teachers. In Edinburgh, however, the income of teachers has remained fairly stable and has therefore not discouraged pupils from choosing the job of teacher.

Second, many Shanghai pupils would like to be businessmen/businesswomen, while only a few Edinburgh pupils opt for this choice (not listed in top ten jobs). This may be explained by the different local labour markets. In Shanghai, where international business is developing rapidly, there are many openings for businessmen/businesswomen. In Edinburgh there are not so many vacancies in the business world.

Third, some Edinburgh pupils choose to be construction workers, whereas no Shanghai pupils select this option. This may be due to pupils' job choice

opportunities. In Shanghai local young people are eligible for a certain range of job choices so few choose manual jobs such as construction worker. Only young people from poor rural areas would accept this kind of employment in Shanghai. However, in Edinburgh low academic school leavers have a very limited choice of jobs, so some choose this kind of job.

Fourth, a number of Edinburgh younger pupils would like to be vets, while no Shanghai pupils choose this job. This reflects the local labour market as well: in Edinburgh many families keep domestic animals, whereas in the city of Shanghai the raising of animals is prohibited and therefore vets does not exist.

Moreover, young people's careers choices are influenced by gender in both Shanghai and Edinburgh. Girls tend to choose traditional female jobs while boys choose traditional male jobs. More girls in both Shanghai and Edinburgh choose to be teachers and doctors, while more boys choose to be technicians. In Shanghai, more girls want to be clerks, designers and tour guides, while more boys want to be businessmen, managers, soldiers and politicians. In Edinburgh more girls choose to be nurses, hairdressers and childminders, while more boys choose to be construction workers and policemen.

In addition, school type attendance is a factor which influences young people's careers choices. Pupils in schools with low academic standards tend to choose low level jobs, such as construction worker, childminder and hairdresser in Edinburgh, and shop assistant and technician in Shanghai. Pupils in schools with high academic standards tend to choose high level jobs, such as lawyer, doctor and scientist. This topic will be further discussed later in this chapter.

4. People from whom pupils get help in making careers decisions

Pupils in both Shanghai and Edinburgh regard parents as the most helpful people when choosing a career. This suggests the importance of close contact and confidentiality, and indicates that careers guidance can be successful only when parents are actively involved.

Unlike Edinburgh pupils, Shanghai pupils rank friends as the second most helpful source when choosing a career. This may be a reflection of the difference between family form in Shanghai and Edinburgh. The majority of Shanghai pupils have no brothers and sisters, but have a few very close friends whom they treat like brothers and sisters. They study together, discuss everything with each other, and therefore friends play an important role when it comes to choosing a career. The relationship between friends in Shanghai is much closer than among Edinburgh pupils.

Edinburgh pupils rank working people as the second most helpful source when choosing a career, whereas these do not rank high amongst Shanghai pupils. This is almost certainly the result of different education systems. Edinburgh schools frequently arrange for pupils to meet working people. For example, children in primary schools receive visits from policemen or policewomen, and working people are often invited to secondary schools to talk about their occupations. Some private schools even invite professional people from foreign countries to talk to pupils. In Shanghai pupils have to concentrate solely on studying. They are overloaded with school work. Normally pupils have to do more than three hours' homework each school day, and go to school five days a week. In addition, most pupils attend some kind of academic institution on Saturday and Sunday to study, for example,

English, music, calligraphy, etc. They have very little chance to talk to working people about their occupations.

Pupils in both Shanghai and Edinburgh rank professional careers guidance providers as of some help. It seems therefore that professional careers guidance providers have not played a dominating role in young people's careers plans. This may be explained by the fact that young people do not get enough chance to have careers counselling. Shanghai guidance teachers have not enough time to develop careers guidance while Edinburgh careers officers have not enough time and chances to access to schools. This issue will be explored in Chapters 7 and 8.

5. Analysis of variables that influence pupils' higher education expectations and careers level and type choices

Factors influencing pupils' higher education expectations

Pupils' academic achievements are the most important factor influencing pupils' higher education expectations in both Shanghai and Edinburgh. This may be explained by the enrolment system for universities and colleges, whereby entrance is dependent mainly on exam results.

However, there is a distinct difference between the higher educational expectations of pupils in Shanghai and Edinburgh. The family's socio-economic class (parents' job levels and qualifications) has a strong influence on pupils' higher educational expectations in Edinburgh, while this is not the case in Shanghai. This may be a result of different social backgrounds. In Edinburgh pupils' socio-economic classes are related to their family income and residential area, which then influence their children's school type attendance. School type attendance influences pupils' academic achievements,

which then limit pupils' university or college entry. But the situation in Shanghai is totally different. In the 1980s the economic reforms allowed many poorly educated people be become rich self-employed. At that time, street food vendors selling, for example, tea eggs, fruit and dumplings, could earn much more money than university professors or famous scientists. Taxi drivers had the most profitable jobs in big cities, and were envied by everybody. In the 1990s good jobs require employees with higher education qualifications. These rich, yet poorly educated people would like their children to receive higher education in order to get good jobs. But only rich parents can afford the high fee for private tuition after school. Normal families can not afford this (normally 15 yuan an hour for one child, which is equivalent to half a day's salary for a university lecturer). Therefore, unlike the situation in Edinburgh, a family's socio-economic class and background might have little influence on pupils' higher education expectations in Shanghai at present.

Factors influencing pupils' job level expectations

Only a few pupils in both Shanghai and Edinburgh choose partly skilled and unskilled jobs (0.3 per cent for Edinburgh pupils and 0.4 per cent for Shanghai pupils).

Pupils' academic achievements, their school type attendance, and mother's job level have a high correlation with their job level expectations. However, there are several differences in the degree of these influencing factors for pupils in Shanghai and Edinburgh.

First, school type attendance is the most important factor for Shanghai pupils in their job level expectations, while it is mother's and father's job levels for Edinburgh pupils. This may be explained by social factors. In the 1980s in Shanghai many poorly educated people became rich self-employed. So

parents' job levels at present do not relate to their income. But parents' income influences their children's educational opportunities, such as the chance for private tuition. Therefore, parents' job levels are not the most important factor in pupils' job level expectations in Shanghai. In contrast, in Edinburgh parents' job levels decide their family income and residential area, which in turn influences the kind of school their children attend. School type attendance then influences pupils' academic achievements, which eventually affect their job level entry.

Second, for Shanghai pupils, mother's job level is the second most important factor in pupils' job level expectations. In Edinburgh both father's and mother's job level are the most important factor in pupils' job level expectations. This may be due to Chinese traditions. Females in China are always expected to do more housework than males. Males are expected to contribute more from their careers. Male staff have more chances to be promoted than female staff. However, in modern society, many high job level women in cities challenge these ideas. They would like to compete with males. They would also like their female children to have high careers expectations.

Third, gender is also a factor influencing pupils' job level expectations in Edinburgh, but not in Shanghai. In Edinburgh more boys choose skilled (manual) jobs than girls, while more girls choose managerial and technical occupations. This may be due to the narrow range of careers expectations. Only about ten jobs are considered by most pupils. Many boys choose the job of construction worker, which belongs to the category of skilled (manual) jobs. Many girls choose to be teachers, a job which belongs to the managerial and technical category.

Factors influencing pupils' job type expectations

The factors influencing job type expectations amongst pupils in Shanghai and Edinburgh are the same: the most important factor is gender, followed by school type attendance.

First, boys tend to choose "realistic" type jobs (Holland's term) while girls prefer social type jobs. This suggests that pupils in both cities are still quite traditional: boys seek jobs where most of the workers are men, while girls prefer to work where most of the workers are women.

School type attendance is the second most important factor. This may due to two reasons. The first one is the narrow range of pupils' job type choices. It has been found that more able pupils tend to choose investigative and enterprising type jobs, such as scientist, doctor, lawyer and businessman/businesswoman, while less able pupils tend to choose "realistic" type jobs, such as construction worker and technician. Each type of job includes both low and high level jobs, but many high level "realistic" type jobs, such as engineer, and low level in investigative and enterprising type jobs, such as warehouse manager and lab assistant, are not chosen by pupils. The second factor may be school careers intervention. Different schools organise different careers guidance activities. One school in Shanghai organises a fabric design interest group, which encourages some pupils to choose this career. In another school a child psychologist is invited to talk about her career, which raises interest in the job of psychologist. In Edinburgh some pupils in one school choose to be computer operators after one week's work experience, while several pupils in another school want to be architects after a careers visit to an architecture department.

However, father's job level also influences pupils' job type choices in Edinburgh, but not in Shanghai. It has been found that father's job level only

influences pupils who are likely to choose "realistic" and social type jobs. Although few pupils choose the same jobs as their fathers, some pupils choose "realistic" and social type jobs, which are the same job types as those of their fathers.

6. The changing process of pupils' careers aims during the secondary school years

During each secondary school year many pupils change their careers expectations (28 per cent - 51 per cent). Younger pupils' careers plans are more unstable than those of older pupils in both Shanghai and Edinburgh. The age at which the highest percentage change their careers expectations is 13 in both countries (51.2 per cent of Shanghai pupils, 37.5 per cent of Edinburgh pupils). This shows that by the age of 13 all pupils have considered their careers aims. However, no schools in Shanghai and Edinburgh provide careers guidance at this stage.

7. The changing value of careers aims during the secondary school years

The time at which the highest percentage make the greatest changes in their careers choices is in juniors 2 and 3 (at the end of junior 2) in Shanghai (36.5 per cent and 23.9 per cent), while it is in S3 and S4 (at the end of S3) in Edinburgh (38.0 per cent and 29.3 per cent). This may reflect the local education systems and the time at which careers choices are made.

In Shanghai pupils have to make their first educational and vocational choices in junior 3, while this choice is not made until S4 by Edinburgh pupils. Many

pupils reconsider their choice of career earlier than the time when they are facing real careers choices. This suggests that many young pupils do not leave their careers decisions to the last school year.

8. Reasons why pupils change their careers aims during their secondary school years

There are five main reasons why pupils change their careers aims: personal factors, occupational information, school education, family, and society. The degree to which a young person is affected by each of these factors varies from individual to individual.

Ideological education, which is emphasised by Chinese schools, has a strong influence on pupils' early careers aims. As pupils grow older, ideology plays a less important role because pupils realise that choosing a career is a very personal decision. The emphasis in Edinburgh schools on the development of individual personality is probably the reason why many Edinburgh pupils regard personal interests and abilities as the most important factors when choosing a career.

In Shanghai more pupils' careers expectations are influenced by school activities than in Edinburgh, because there is more opportunities to join interest groups (interest groups are similar to school club in Edinburgh). Interest groups are the main way in which Shanghai pupils get to know themselves and learn about occupations, which in turn influences their careers choices. However, Edinburgh pupils have more chance of meeting working people and getting direct occupational information from them, which often causes them to change their careers aims.

Family plays an important role in the decision making about careers in both Shanghai and Edinburgh. A number of Shanghai pupils regard job status as influential, while Edinburgh pupils do not. This suggests that family ties are closer amongst the Chinese than amongst the Scottish. As the majority of Shanghai pupils are the only child in their family, they seem to be more concerned that their job status will uphold the social status of their family.

Public opinion also influences Shanghai pupils when choosing a career (43.0 per cent in Senior 3), while Edinburgh pupils show little concern for it. With the rapid change in the labour market in Shanghai, more and more new jobs are appearing, and the content of many old jobs is changing as well. Parents do not have access to enough, accurate careers information. They encourage their children to concentrate on their academic studies, rather than on finding out about careers. Careers guidance does not yet play an important role in schools, which perhaps causes many young people to follow public opinion and to choose their careers blindly. They do not have the chance to get to know themselves and different occupations thoroughly, and are therefore unable to make realistic careers decisions by themselves.

9. Discussion

This comparative study has shown that young people's careers developments are influenced by their personal psychological development (interests and abilities), by their culture and school, by school careers intervention, by their family, by the prevailing political, economic and cultural climate, by public opinion and by the labour market. However, none of the existing careers models encompass all these important factors.

Matching model

The surveys in both Shanghai and Edinburgh support the matching model that personal interests and abilities are the most important factors in young people's careers choices. Matching personal interests and abilities with job requirements is an important aspect of careers guidance.

However, the survey results in both Shanghai and Edinburgh indicate that the matching model neglects the fact that choosing a career is a process. As they advance at school, young people develop new interests and abilities. Their careers aims often change with their new interests and abilities, and with information accumulation.

Second, young people's careers choices in Shanghai and Edinburgh are influenced not only by their personal characteristics, but also by their socio-economic class, family, gender, school and society. But the degree of influence differs from Shanghai pupils to Edinburgh pupils because of the different economy, culture and traditions.

Third, young people's careers consideration in both Shanghai and Edinburgh start at an early stage, before the secondary school years.

Personality type model

This survey pointed to some vital shortcomings in Holland's model. As in the case of matching model, Holland's model does not recognise that teenagers change as they grow up. Secondary school pupils' careers choices are a changing process and are very unstable. This study has found that gender plays a very important role in young people's careers choices in both Shanghai and Edinburgh, and yet Holland's model neglects gender entirely. Boys and girls have different careers choices. Therefore, Holland's model cannot be used at the secondary school stage.

According to Holland's personality type classification, people of the "realistic" type lack social ability, people of the conventional type lack artistic ability and people of the investigative type lack enterprising ability. It is doubtful that each type of job has a fully unrelated type of job. In modern society, more and more jobs require employees with multiple skills. Therefore, Holland's model may not be used in modern society.

Developmental model

This survey supported one idea of developmental model that people started their careers choices at an early stage. However, the developmental model recognises different stages in the development of a young person's careers plan, which contrasts with the result of the surveys which found that young people's careers development is highly individual. There seem to be no distinct stages of careers development for secondary school pupils. Young people in both Shanghai and Edinburgh did not change their careers aims with their careers psychological development. Some of them changed their careers aims with self-understanding and accumulation of occupational information. Even many senior secondary school pupils in Shanghai follow public opinions to choose their careers.

Opportunity structure model

The surveys in both Shanghai and Edinburgh support the idea of opportunity structure model that the academic standard of a school is a major influencing factor on young people's higher education and job level expectations.

The surveys show that parents' job levels play an important role in careers choice for Edinburgh pupils, as the opportunity structure model argued, but this is not confirmed by Shanghai pupils. This may be explained by the different economic systems and reforms.

In addition, gender is an important factor in pupils' job choices, especially their job type choices, which is not mentioned by the opportunity structure model. Moreover, pupils start to choose their careers aims at early stages. School careers intervention has an influence on pupils' careers choices. Many pupils change their careers aims with self-understanding and the accumulation of occupational information through school careers guidance.

Combination model

The combination model supposes that careers guidance is to help people find the best combination of personal characteristics and community needs.

The surveys in both Shanghai and Edinburgh show that personal interests, abilities and community needs are all important factors in pupils' careers choices. However, young people's careers choices are much more complicated, and highly individual, influenced by school careers intervention, society, family, socio- economic classes, academic achievements and gender. Each factor has a different degree of influence depending on the pupil's background, school, family and society.

Therefore, although some aspects of each of the careers guidance models appear to be relevant to the situation in Shanghai and Edinburgh, no one single model seems appropriate for use in either country.

CHAPTER 7

AN ANALYSIS OF PUPILS' EXPERIENCE AND PERCEPTION OF CAREERS GUIDANCE METHODS IN SHANGHAI

Chapter 7: An Analysis of Pupils' Experience and Perception of Careers Guidance Methods in Shanghai

1. Introduction

Chapter 5 analysed pupils' experience and perception of careers choices in Shanghai and evaluated different careers guidance models. However, pupils' experience and perception of careers choices often reflect careers guidance practice. This Chapter will explore pupils' experience and perception of careers guidance practice in the context of Shanghai. Parts of Chapter 10 will examine the relationship between careers guidance models and practice.

Careers guidance originated in several secondary schools in the Luwan Education Bureau of Shanghai in 1987. From 1992 to the present Shanghai has been the only city in China to set up a careers guidance programme for pupils from Junior 2 to Senior 3 in all secondary schools. Careers guidance is conducted by guidance teachers (not careers officers in China) using the following methods: careers interest groups, competitions, careers talks, careers days, careers rooms, psychological tests and careers counselling.

At the time of the survey conducted by the author in Shanghai from May to April 1994, all schools had been practising careers guidance for more than two years. But no research has been done to explore pupils' experience and perception of school careers guidance practice. Examining careers guidance practice is a high priority in order to improve careers guidance work. This Chapter examines the kinds of help that pupils

require from careers guidance, and assesses the seven methods of careers guidance mentioned above.

2. The kinds of help required by Shanghai pupils from careers guidance

In order to assess the kinds of help required by Shanghai pupils, pupils were asked to rate a number of points involved in their careers decision-making. Each was rated according to four levels: very important, quite important, not very important, and not important. The results are presented in Table 7.1 below.

Table 7.1. The mean, standard deviation and ranking of the kinds of help required by Shanghai pupils from careers guidance (N=689)

Area of Help Required	Mean	SD	Ranking
Help in becoming more aware of vocational interests and abilities	1.38	0.61	1
Help in obtaining more careers information	1.47	0.68	2
Help in making wise educational and vocational decisions	1.56	0.77	3

Mean: 1 = Very important 2 = Quite important
3 = Not very important 4 = Not important

Table 7.1 demonstrates that the three areas in which pupils require help when making career choices - that is, help in becoming more aware of their own vocational interests and abilities, help in obtaining more careers information, and help in making wise educational and vocational decisions - are all quite important for pupils (mean < 2). The

area in which pupils felt they needed most help was in becoming more aware of their own vocational interests and abilities; this was followed by the need to obtain more careers information.

The last two questions in the survey asked pupils to write down their careers needs and any comments or suggestions about their experience of careers guidance.

56.8 per cent of pupils appeared to need more careers guidance. The following were some typical comments:

> It is the last year for our non-academic pupils in ordinary school. We will be streamed to accept vocational and technical training in a few months because my class is a low academic class. But I have no clear idea what occupational subjects I would like to choose because I only know about a very limited number of occupations. I hope that school can provide us with more careers guidance and more chances to have work experience in order to make wise careers choices. (Junior 3, boy, School 1, low academic standard school).
>
> My school only introduces certain attractive occupations in society and neglects unattractive jobs. We also want to know about the attractive jobs of the future. (Senior 2, boy, School 2, mixed academic standard school).
>
> Our school only focuses on pupils' academic achievements and neglects careers guidance. This means pupils will choose their occupations blindly. I strongly appeal that school should provide more careers guidance for us. (Senior 2, girl, School 3, high academic standard school).
>
> I think our school should set up a careers counselling room so we can ask for advice on our careers plans from careers experts. (Junior 2, boy, School 1, low academic standard school).
>
> Our school provides careers guidance according to pupils' exam results. It is not enough to help pupils get the most suitable

occupations. (Senior 1, boy, School 2, mixed academic standard school).

Schools should set up voluntary courses in order to give us a chance to explore our personal interests and abilities. (Senior 1, girl, School 2, mixed academic standard school).

Our school only encourages us to apply for universities and colleges and often misleads pupils in their careers choices. (Senior 3, boy, School 3, high academic standard school).

My school careers guidance was so little that we were confused when we were asked to select 16 vocational and technical schools and 32 subjects from a few hundred schools and subjects last year. (Senior 1, girl, School 3, high academic standard school).

My choice of career is very important for me, like my second reincarnation, which will decide my future life. I am very concerned about my future career, but school does not care at all. (Junior 3, girl, School 3, high academic standard school).

3. The requirements of guidance teachers

In order to explore whether careers providers can give effective careers guidance to pupils, guidance teachers were asked to write down the major problems of careers guidance in their schools, and to make suggestions for improving school careers guidance. Some respondents wanted to discuss the problems and submit a joint questionnaire. For example, two junior secondary school guidance teachers in the same school discussed and answered one questionnaire.

According to guidance teachers' comments, there are several barriers hindering the provision of careers guidance for young people.

Lack of administrative management

Careers guidance providers need a great deal of time to engage in this complex work. Schools should set aside certain times for them to develop careers guidance. However, many school administrators have not yet regarded careers guidance as an important part of school education. The majority of guidance teachers complained:

> We are overloaded with our teaching and other class work. We simply do not have enough time to evaluate careers guidance work. (Three guidance teachers in a high academic level school).

> Careers guidance is still new work in Shanghai. Although I was trained for three months, I have not got enough knowledge and skill to deal with all the different kinds of careers problems encountered by pupils. The school should arrange for us to have more time to exchange experience of careers guidance with other guidance teachers. (A guidance teacher at Junior 2 in a mixed academic level school).

> We have no time to contact vocational and technological schools and companies to collect careers information. (Three guidance teachers in a low academic level school).

> In our view careers guidance is important for pupils. Only when schools make careers guidance a part of school education can this work be successful. (Five guidance teachers in a middle academic level school).

Lack of gradual careers guidance programmes

Young people's careers plans are a changing process with the increase of self-knowledge and occupational information. Young people need help throughout this changing process. A number of guidance teachers mentioned:

> School careers guidance has no systematic plan. Careers guidance is often interrupted by pupils' frequent exams. (Three guidance teachers in a high academic level school).

> Careers guidance should be put in the timetable from J1 to S3 and should not consist of simply one careers counselling. (Five guidance teachers in a middle academic level school).

Lack of careers guidance materials

Careers information is a key part of careers guidance. Wise careers choices are based on accurate and broad careers information. So far there are no special agencies that collect and provide careers information, and so it is difficult for guidance teachers to acquire broad careers information. Some guidance teachers felt:

> There is no careers information centre so we cannot get broad careers information. (Five guidance teachers in a middle level school).

> Although there is a careers room beside the school library, the careers materials are insufficient. We do not have enough time to collect careers materials. (Three guidance teachers in a low academic level school).

4. Evaluating methods of school careers guidance

In order to evaluate the influence of school careers guidance methods on pupils' careers choices, pupils were asked to write down the reasons why they changed their career aims from Primary 6 to Senior 3, and to write down some comments about their experience of school careers guidance methods. Seven school careers guidance methods were mentioned by pupils as influencing their careers choices: careers interest groups, competitions, careers talks, careers days, careers rooms, psychological tests and careers counselling. Two informal routes, T.V./films/novels and the school curriculum, also affected pupils' careers considerations.

Careers interest groups

In each school there were about 10 interest groups, covering a wide range of subjects such as medicine, radio-repairs, sewing, cooking, sports, literature, art and dancing. Pupils were free to choose and change their interest groups. The following are some comments from pupils after joining interest groups:

> I joined a Summer Camp to investigate stones and water at the Tiger and Leopard Spring in Hangzhou. I carried back a sack of stones to Shanghai. After studying these stones I wrote an essay entitled Discovering the Secret of "Tiger and Leopard Spring" which was published in the newspaper, *Secondary School Pupils*. After that I considered becoming a geologist. (Senior 3, boy, School 2, mixed academic standard school).

> I would like to be a dress designer or tailor after attending the sewing interest group for one year. One of the children's skirts that I designed and made in the sewing interest group was selected by the Shanghai No. 10 Cloth Factory. (Senior 2, girl, School 1, low academic standard school).

> I wish my school would set up more interest groups so that we could have more chance to manifest our vocational interests and abilities. This would be valuable for us when choosing a career. (Junior 2, girl, School 1, low academic standard school).

> I hope that our school can set up a business interest group considering many of us would like to be businessmen or businesswomen. We need the chance to explore whether we would be suited to business. (Senior 2, boy, School 3, high academic standard school).

Interest groups can give pupils the chance to explore their vocational interests and abilities. However, there are certain limitations in this method. First, most pupils only have the chance to join two or three interest groups during their secondary school years, so they cannot explore a wide range of occupations. Second, the types of interest groups available are entirely dependent on schools' teaching equipment and teachers, and are not chosen according to the local labour market. For these reasons interest

groups cannot meet all pupils' needs. For example, many pupils would like to enter business, but no school had a business interest group. This is because schools have no business teachers or related facilities.

Competitions

Competitions give pupils a chance to display their abilities. Guidance teachers create many competitive activities based on the classification of abilities. For example, through writing and telling a story, pupils can express their verbal ability. Through speedy counting, pupils can display their level of numeracy. Through speedy typing, pupils can display their hand and finger dexterity. Following are some comments from pupils after participating in competitions:

> I got second prize in the writing competition and first prize in the speech competition at my school. This made me want to be a lawyer. (Senior 2, boy, School 3, high academic standard school).
>
> I would like to work with computers because I got third prize in the typing competition in my district. (Senior 3, girl, School 1, low academic standard school).
>
> I want to be a school teacher since I was 'the best at acting as a guidance teacher' in my class. (Senior 1, girl, School 2, mixed academic standard school).

Competitions can help pupils discover their special talent, and thus choose a career. However, most pupils do not win prizes in competitions and therefore need other routes to explore their careers choices.

Careers talks

Schools sometimes invite people who have been successful in certain occupations to give talks about their occupations. In this way they can describe their experience of successful careers paths.

> After listening to a speech entitled "I love my job - Beauty Worker" by the famous beauty expert, Zheng Mingming, I was very interested in this occupation. (Junior 2, girl, School 1, low academic standard school).
>
> Professor Wang Yunying, a child psychologist, gave a wonderful speech about her career. I would like to pursue the occupation of child psychologist. (Senior 2, girl, School 3, high academic standard school).

Careers talks are an easy way to provide occupational information to pupils. Pupils are also interested in meeting working people and learning how they have made a success of their careers. However, schools tend to invite successful people to talk to pupils, and these people normally have special interests and abilities that suit their job. They introduce their job in such a way that often conceals why other people might not make a success of the same job.

Careers days

The aim of careers days is to open all opportunities of vocational and technical training to all pupils. On careers days, which are usually held on a Sunday, a large school or park is selected as a counselling place. All vocational and technical schools are invited to set up counselling tables. Representatives from all fields in vocational and technical schools provide free brochures on careers information. Some schools show careers videos. Pupils, parents and teachers can ask representatives all kinds of careers questions. Here are some comments from pupils about careers days:

> I am suited to be a nurse but I have always been afraid of infectious diseases. The representative from a nursing school on careers day advised me to be a midwife. I have accepted her advice and would now like to be a midwife. (Junior 3, girl, School 3, high academic standard school).
>
> I am interested in becoming a painter but to do this requires higher education. My academic qualifications are not good enough for me to enter higher education. At the careers day I met the representative from

an enamelware factory. He told me that painting was one of the subjects in their Skilled-Worker School, which was run by their factory. Graduates in this subject are qualified to design patterns on enamelware. I have kept in contact with this school and have decided to apply for a place as my first choice. (Junior 3, boy, School 2, mixed academic standard school).

I would like to be an underground driver. The representative of the No. 2 Vocational School at the careers day told me that they would set up an option for those wishing to be underground drivers. All pupils would study at the school for two and half years and would then be trained in Japan for six months. I would like to go abroad to broaden my views so I decided to apply for this vocational school. In fact I am not sure whether I am suitable for this job or not. (Junior 3, boy, School 1, low academic standard school).

The present writer attended Careers Day 1994 for junior secondary school leavers in one district of Shanghai. At this careers day were representatives from 135 vocational and technical schools in Shanghai. Each school set up a counselling table, provided free booklets about occupations and answered pupils' questions. Some schools showed video tapes to introduce school subjects and future occupations. The enrolment officer was there to answer pupils' questions about enrolment policies. Many pupils came with their parents and grandparents for the whole day. Many pupils not only asked their own questions but stayed on to listen to what other pupils would ask. They wanted to find out about occupations in as much detail as possible. After the careers day all vocational and technical schools had a list of pupils who were interested in their schools.

Careers days are a useful way for all pupils to gather occupational information. Vocational and technical schools also get the chance to look for potential pupils. However, there were a few shortcomings of Careers Day 1994. First, all representatives introduced only the good points of their occupations and avoided mentioning the hard aspects. For example, one

representative from a hotel vocational school told pupils repeatedly: "The first month's bonus for our school leavers is 2000 yuan (about £170), which is almost twice a university professor's salary". He used high salary to attract applicants but did not describe the work. Such promotion methods can confuse pupils. Second, most guidance teachers were absent and thus missed a good chance to collect occupational information for their careers rooms and meet representatives from vocational and technical schools. Guidance teachers in Shanghai have responsibility for pupils' careers guidance. They should be involved in careers days to collect and analyse occupational information in order to provide the whole picture of occupations to their pupils. For example, they could describe some of the jobs that hotel workers have to do, such as standing by the gate to welcome guests six hours a day, cleaning bedrooms and toilets, and waitressing.

Careers rooms

Some secondary schools have set up small careers rooms or careers corners near or inside the school library. Careers guidance material is collected by school librarians, pupils and guidance teachers.

There seem to be four types of careers material: books and journals; the previous year's enrolment booklets for post junior secondary schools; careers reports written by pupils; and video tapes shot by the Shanghai Education Bureau from 1992 to 1994. There were 12 tapes, each introducing an occupation, such as nursing, accountancy, teaching, the police force, weaving and driving.

Careers rooms can help pupils gather information on an occupation in a short time. However, not one of the careers rooms in the four selected secondary schools was attractive to pupils, in the present author's opinion. There were several reasons for this. First, the occupational materials did not cover a wide range of occupations. The books and journals on careers

guidance were aimed mainly at guidance teachers, and not at pupils. The content of the enrolment booklets was oversimplified, including only the school name, the number and gender of pupils enrolled, the school address and the subjects offered. Second, the careers video tapes only showed the good aspects of occupations. For example, the video on nursing shows a beautiful campus at a nursing school with nurses all dressed in clean white uniforms and speaking in a friendly way to patients in hospitals. The hard aspects of nursing were not shown at all. A guidance teacher was interviewed about this point by the present author in April 1994. Her reply was: "The Educational Bureau has not enough funds to shoot careers video tapes. Only vocational and technical schools can afford to make them, so the Educational Bureau is only in charge of making them. These vocational and technical schools want to hide the hard aspects of certain occupations in order to enlist more qualified pupils." In Shanghai all vocational and technical schools compete to enrol better pupils. They try to get as many applicants as possible so that they have a good choice of new pupils. If such careers videos are not supplemented by information from guidance teachers, pupils will gain only very biased occupational information from them.

Psychological tests

A series of non-standardised psychological tests, including a vocational interest test, a vocational ability test, and a vocational temperament test, is widely used in secondary schools.

> I am interested in psychological tests. They gave me a lot of job ideas. (Senior 1, boy, School 1, low academic standard school).
>
> Psychological tests widened my careers considerations. (Senior 2, girl, School 3, high academic standard school).
>
> I found that the job suggestions given after psychological tests were unrealistic. One test showed me suitable to be a geologist. However, I

would not choose this job. (Junior 2, boy, School 2, mixed academic standard school).

A non-standardised psychological test is a self-assessment test which can develop pupils' career awareness and help them gain a rough picture of themselves in a short time. However, there are a few shortcomings of this type of test. First, this is a pencil and paper test, so the results cannot be accurate. Many important abilities, such as communication, eye-hand coordination and manual dexterity, are difficult to test. Only involvement in an activity will bring out one's interests and abilities. Second, as there is no norm with which to compare pupils' test results, the results cannot be compared with those of other people.

Counselling

Counselling often helps a pupil to solve his or her own careers problems. Counselling includes individual counselling, group counselling and peer counselling.

Individual counselling

Pupils can make an appointment with their guidance teacher to discuss their career problems. Pupils made the following comments about careers counselling:

> Although I made a careers decision by myself finally, it was very useful to get advice from a guidance teacher. My guidance teacher gave me more job ideas and helped me to understand myself. (Senior 3, girl, School 3, high academic standard school).

> My guidance teacher was only interested in able pupils because they would have more freedom to choose their careers. Less academic pupils have little chance of getting careers advice from guidance teachers. In fact it is we who need careers advice urgently because we will have to accept occupational training next year. (Junior 2, boy, School 1, low academic standard school).

> I need careers counselling when I change and even lose my career aims. But the guidance teachers are not often available. (Senior 2, girl, School 2, mixed academic standard school).

Group counselling

This type of counselling is offered to groups of pupils who have the same questions. For example, if a group of pupils wanted to learn about enrolment methods, a guidance teacher would invite recruitment officers to the school to answer pupils' questions.

> It is very important for us to understand the methods of enrolment. It is extremely useful to get advice on how to fill in application forms in order to be enrolled. (Junior 2, girl, School 2, mixed academic standard school).

> One of my relatives got high exam marks but failed to get in to his preferred school because his choice rankings were not correct. (Senior 1, boy, School 3, high academic standard school).

> Our school invited the director of the Education Bureau to give us some information on teaching posts. In Shanghai lack of teachers has become a serious problem. All parents want their children to have good teachers but do not want their children to be teachers. I would like to be a teacher because I am interested in this job and the exam requirements for normal (teacher) universities are not high. (Senior 1, boy, School 2, mixed academic standard school).

Peer counselling

Pupils discuss careers choices amongst themselves. For example, if one pupil has a careers problem another pupil will provide relative careers information and give suggestions.

> I would like to discuss my occupational choices with my peers because we are of a similar age and we understand each other's thoughts. (Junior 2, girl, School 1, low academic standard school).

Careers counselling is a useful way to solve pupils' careers problems but schools should provide more opportunities for pupils to meet counsellors.

5. Other influences on pupils' careers choices

T.V., films and novels

A number of pupils' careers considerations are influenced by T.V., novels or films.

> I would like to be a policeman after watching a few films about policemen. I found the job both wonderful and stimulating. (Junior 2, boy, School 1, low academic standard school).
>
> After reading a book called 'Health and Life' I realised that medical science is so important that I would like to be a doctor. (Senior 1, girl, School 3, high academic standard school).
>
> I watched a T.V. show, 'Public Relations Miss', and found public relations is an attractive field for girls. I will try my best to look for this kind of job. (Senior 1, girl, School 2, mixed academic standard school).

The problem with careers information gained from T.V., films and novels is that much of it is not typical of real life and does not reflect a general picture of occupations.

School curriculum

Many pupils base their careers plan on the subjects they enjoy at school and on their exam results. For example, a pupil who likes mathematics chooses to be a mathematician. The following are a few typical examples:

> I would like to be an accountant because I am good at mathematics. (Senior 2, girl, School 1, low academic standard school).

Since I got full marks in a physics exam, I want to be an engineer. (Senior 1, boy, School 2, mixed academic standard school).

I am top of the class in English and my careers aim is to be an interpreter. (Junior 2, girl, School 3, high academic standard school).

There is a marked relationship between school subjects and occupations, but if pupils base their careers choices simply on school courses, they are narrowing their choices. In fact, one occupation is usually related to many different subjects, not just one. School subject teachers might help pupils become aware of this.

6. The relative helpfulness of each careers guidance method

The pupils were asked to rate the relative helpfulness of careers guidance methods in their careers choices. Each was rated according to three degrees of helpfulness: a lot of help, some help, no help, and not applicable. The results are shown in Table 7.2 below.

Table 7.2. The mean, standard deviation and ranking of the activities from which pupils get help in making careers decisions

Activity	Mean	SD	Ranking
Careers day	1.92	0.57	1
Careers interest group and competition	1.95	0.65	2
Careers counselling	2.04	0.68	3
Careers talk	2.12	0.76	4
Vocational interest test	2.13	0.61	5
Vocational ability test	2.14	0.59	6
Careers room	2.21	0.61	7

Mean 1 = A lot of help 2 = Some help 3 = No help
Rankings 1 = Most helpful 7 = Least helpful

Table 7.2 shows that careers days are the greatest help to pupils when choosing a career. This may be explained by the fact that ordinary schools cannot provide enough up-to-date careers information, which pupils need to make careers decisions. Interest groups were ranked second in terms of helpfulness. This suggests that pupils like to explore and develop their careers interests and abilities through activities. Careers counselling and careers talks were ranked as providing some help for pupils in their careers choices, because, although many pupils would like to make careers decisions by themselves, they also need advice from guidance teachers and some related information in order to make a wise choice. Vocational tests were regarded as not very helpful, which points to the limitations of non-standardised psychological tests that provide only some information about individuals. Surprisingly, careers libraries were regarded as the least helpful, perhaps because many are not well maintained and have insufficient careers materials.

7. Occupations considered by pupils

All the pupils in this survey were asked to write down the specific occupations that they had considered in each secondary school year. Only 34 jobs were mentioned by pupils in their careers considerations from Primary 6 to Senior 3 as follows.

> Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, occupational therapist, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, soldier, air hostess, chef, shop assistant, industrial worker, driver, postman/postwoman, hairdresser, pilot, computer operator, librarian, detective, public relations officer, tour guide, journalist, translator and politician.

It is interesting to examine the range of pupils' occupational considerations in each secondary school year.

31 jobs were mentioned by pupils when they chose their future occupations in Primary 6.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, soldier, air hostess, chef, shop assistant, industry worker, driver, postman/postwoman, hairdresser, pilot, computer operator, librarian, detective, public relations officer, tour guide, journalist, politician and translator.

29 jobs were mentioned by pupils when they chose their future occupations in Junior 1.

> Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, soldier, air hostess, chef, shop assistant, industry worker, driver, pilot, computer operator, social worker, detective, public relations officer, tour guide, politician and translator.

30 jobs were mentioned by pupils when they chose their future occupations in Junior 2.

> Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, soldier, air hostess, chef, shop assistant, industry worker, driver, hairdresser, pilot, computer operator, social worker, detective, public relations officer, tour guide and politician.

30 jobs were mentioned by pupils when they chose their future occupations in Junior 3.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, occupational therapist, designer, manager, businessman/businesswoman, teacher, technician, accountant, clerk, policeman/policewoman, soldier, air hostess, chef, shop assistant, industry worker, driver, hairdresser, pilot, computer operator, detective, public relations officer, tour guide, journalist and politician.

25 jobs were mentioned by pupils when they chose their future occupations in Senior 1.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, designer, manager, businessman/businesswoman, teacher, technician, accountant, clerk, policeman/policewoman, soldier, shop assistant, pilot, computer operator, detective, public relations officer, tour guide, journalist, politician and translator.

23 jobs were mentioned by pupils when they chose their future occupations in Senior 2.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, designer, manager, businessman/businesswoman, teacher, technician, accountant, clerk, policeman/policewoman, shop assistant, computer operator, detective, public relation officer, tour guide, journalist, politician and translator.

15 jobs were mentioned by pupils when they chose their future occupations in Senior 3.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, designer, manager, businessman/businesswoman, teacher, technician, accountant, clerk, computer operator, journalist and politician.

It can be seen that young people have had occupational considerations from Primary 6. But the range of careers considerations for pupils are very narrow and no pupils chose the job of engineer.

Pupils' range of careers considerations are mainly shaped in Primary 6. Only three jobs - architect, author and occupational therapist - were mentioned

after Primary 6. With the rising of class, pupils' range of careers choice becomes narrower (31 jobs in Primary 6, 29 jobs in Junior 1, 30 jobs in Junior 2, 30 jobs in Junior 3, 25 jobs in Senior 1, 23 jobs in Senior 2 and 15 jobs in Senior 3). During the senior stage, pupils do not consider some low level jobs, such as postman/postwoman, chef and industry worker because they have by then gained some qualifications and are setting their sights higher.

This narrow range of careers may be explained by the shortage of a wide range of occupational information. Therefore, school careers guidance should provide pupils with more careers information to enlarge their range of careers choices.

8. Unequal opportunity in enrolment and recruitment

It has been found from the survey that the majority of pupils admitted that sex discrimination is a serious factor in enrolment and recruitment. The majority of pupils, 85.3 per cent, think that sex discrimination is unfair. But 14.7 per cent pupils think that it is fair. The following are some typical comments:

School, college and university enrolment

> Some post-junior secondary schools require much higher exam marks for girls than for boys in enrolment. Female graduates find it much more difficult to get jobs than male graduates. (Senior 1, girl, School 3, high academic standard school).
>
> My female maternal cousin got the highest marks in her class in the university entrance exams. She failed in the competition with her male classmates to get in to the department of her choice at university because she was female. (Junior 2, girl, School 1, low academic standard school).

Company recruitment

The newspaper advertisements for managerial posts always specify males. (Senior 3, boy, School 2, mixed academic standard school).

Many work units do not want to recruit female employees, because they foresee problems such as pregnancy and childcare, etc. (Junior 3, girl, School 2, mixed academic standard school).

My female maternal cousin graduated from college last year and applied for a post in a bank. During the interview she was asked if she could speak Spanish. She said no. Then the interviewer said: "If you were male we would recruit you." (Senior 1, girl, School 3, high academic standard school).

Sex discrimination is a serious problem. Males are judged according to their qualifications, expertise and experiences, but females in practice can compete with males only in certain service jobs if they are the right age and beauty. Older women are unwelcome in most occupations. (Senior 3, girl, School 3, high academic standard school).

Early retirement

Many work units try to advise some of their employees to take early retirement. Most of those who are retired early are female. (Senior 1, boy, School 2, mixed academic standard school).

Some girls' views

I would like to choose a relaxed job with not too much pressure because I am female. (Senior 1, girl, School 2, mixed academic standard school).

Many people believe that males are both stronger and more able than girls. Facts also confirm this view. (Senior 3, girl, School 3, high academic standard school).

I do not believe that girls are less able than boys. Many successful people in all kinds of occupations are females. (Senior 3, girl, School 2, mixed academic standard school).

Some boys' views

> Males are brighter and stronger than females. It is quite reasonable for employers to prefer to recruit males in a competitive society. (Junior 3, boy, School 1, low academic standard school).
>
> Hotel employers only recruit young and beautiful girls as waitresses. I believe that I am suitable to be a waiter and would do a better job than a girl. (Junior 2 Boy, School 2, mixed academic standard school).

The majority of pupils admit that sex discrimination is a serious problem. Most pupils think that this is unfair for females. A number of pupils think that it is fair because of family tradition and female shortcomings. Even some girls underestimate female abilities and have not realised their equal rights with males.

Although sex discrimination in enrolment and recruitment cannot be solved through careers guidance research, researchers should appeal to establish a law of equal opportunity for females. Otherwise if it is known that girls do not have the same opportunities as boys, much of the careers guidance given to girls is simply wasted.

9. Discussion

The survey shows that careers guidance is highly necessary for pupils. Guidance teachers need support and more time from their schools and society to develop careers guidance programmes. However, school careers guidance in Shanghai is still in its infancy. It needs the support of schools, families and society. Two careers guidance organisations need to be set up urgently. One is a general careers guidance centre, which would be responsible for careers guidance research, the exchange of careers guidance experiences, the training of guidance teachers and helping them to cope with special cases. The other organisation that is greatly needed is a careers

information unit, which would collect, analyse and edit careers materials and deliver them to guidance teachers.

There are seven main methods of careers guidance in schools. Each of these methods has its advantages and disadvantages. Careers interest groups and competitions can help pupils explore and develop their vocational interests and abilities through activities. But pupils are limited by the interest groups and competitions available. Therefore, interest groups should be organised according to the local labour market and pupils' possible careers choices, rather than according to schools' equipment and available teachers. Schools could rent workshops and equipment from vocational and technical schools to develop interest groups. Schools could also organise competitions based on pupils' vocational expectations.

Careers talks can help pupils gather careers information and hear about successful careers. However, schools always invite people who have been successful in their careers, and who tend to talk about their own success story rather than provide the whole picture of an occupation. Therefore, schools might organise careers visits after careers talks. This would allow pupils to learn about an occupation from someone who was successful at it, and then to see a broad spectrum of people at work in the same occupation. In this way they could see the whole picture of an occupation.

Careers days are regarded as the greatest source of help by pupils as they provide up-to-date careers information. However, representatives at careers days often introduce the good sides of their occupations, and avoid the negative aspects, with the result that pupils again do not get the whole picture of an occupation. Guidance teachers should be more involved in careers days, as they present an opportunity to meet representatives from vocational and technical schools and to collect careers information. Therefore, careers days should involve guidance teachers, pupils and

parents. After careers days, guidance teachers should organise meetings to discuss what pupils have gained from them.

Careers rooms should be better utilised as a means to provide instant occupational information. However, the careers rooms in Shanghai are poor and lacking in information, which means that pupils are not interested in using them. Schools would prefer to sell off a room to a local business than to make it into a careers library. Several careers video tapes have been shot and shown to pupils. This is a good start although the content of the videos could be improved so that they reflect all the aspects of an occupation. However, careers rooms need to be improved. A special work unit could be set up to collect careers information, and guidance teachers and librarians could be encouraged to maintain a good careers room.

Non-standardised psychological testing is a supplemental tool in careers guidance, that can develop pupils' careers awareness, but it cannot replace other careers guidance methods. Therefore, non-standardised psychological testing could be used to help pupils understand themselves better. However, careers teachers should make sure that pupils know the limitations of these tests, and they should help to provide explanations of test results.

Counselling is the best way to solve pupils' individual careers problems. However, pupils need more chance to meet guidance teachers, but guidance teachers do not have enough time to take on more work. Therefore, counselling should be an important part of careers guidance. Schools might set up counselling rooms and arrange more time for careers teachers to interview pupils.

Parents play an important role in their children's careers choices. Schools could also use parents to help them develop careers guidance. For example,

schools could invite parents to talk to pupils about their jobs. Parents who are doctors or nurses could be invited to school as counsellors of medical interest groups, and parents in business could be asked to organise a careers visit to their company.

Careers information provision should be a key part of careers guidance at present in Shanghai. More careers information is required by pupils. Pupils' careers considerations are very narrow, with only 34 occupations being mentioned from Primary 6 to Senior 3 in the survey.

Although each careers guidance method plays a role in a pupil's career considerations, each has its limitations. In my view, schools could set up a careers guidance course to make careers guidance work continuous and systematic. This course could combine lectures with activities, non-standardised psychological testing and counselling.

The majority of pupils complained of sex discrimination in enrolment and recruitment. If this situation continues, it is a waste of human resources. The government should take measures to guarantee females the right to compete with males in education and occupations so that females can make a greater contribution to society.

CHAPTER 8

AN ANALYSIS OF PUPILS' EXPERIENCE AND PERCEPTION OF CAREERS GUIDANCE METHODS IN EDINBURGH

Chapter 8: An Analysis of Pupils' Experience and Perception of Careers Guidance Methods in Edinburgh

1. Introduction

Chapter 5 analysed pupils' experience and perception of careers choices in Edinburgh and evaluated different careers guidance models. However, pupils' experience and perception of careers choices often reflect careers guidance practice. This Chapter will explore pupils' experience and perception of careers guidance practice in the context of three selected secondary schools in Edinburgh. Parts of Chapter 10 will examine the relationship between careers guidance models and practice.

School careers guidance has been in effect for a long time in Scotland. Careers guidance is conducted by careers officers and careers teachers through a series of careers guidance activities. Careers guidance practice differs from one school to another according to careers officers' and careers teachers' efforts and school support. The survey in Edinburgh was conducted in three selected secondary schools. It has been found that the following six careers guidance methods were widely used in these schools: careers visits, work experience, careers days, careers libraries, computer-assisted careers guidance and information, and careers counselling.

However, limited research has been done to explore pupils' experience and perception of school careers guidance practice. Examining careers guidance practice is a high priority in order to improve careers guidance work. This chapter examines the kinds of help that pupils require from careers guidance, and assesses the methods of careers guidance.

2. The kinds of help required by Edinburgh pupils from careers guidance

In order to access the kinds of help required by Edinburgh pupils from careers guidance, pupils were asked to rate a number of points involved in their careers decision-making. Each was rated according to four levels: very important, quite important, not very important, and not important. The results are presented in Table 8.1 below.

Table 8.1. The mean, standard deviation and ranking of the kind of help required by Edinburgh pupils from careers guidance (N=369)

Area of Help Required	Mean	SD	Ranking
Help in obtaining more careers information	1.52	0.64	1
Help in making wise educational and vocational decisions	1.66	0.72	2
Help in becoming more aware of vocational interests and abilities	1.77	0.71	3

Mean: 1 = very important 2 = Quite important
3 = Not very important 4 = Not important

Table 8.1 demonstrates that the three areas in which pupils require help when making career choices - that is, help in obtaining more careers information, help in making wise careers choices and help in becoming more aware of their own vocational interests and abilities - are all quite important for pupils (mean < 2). Among these, the need for more careers information was seen as the most important, followed by the need to obtain help in making careers decisions.

The last two questions in the survey asked pupils to write down their careers needs and any comments and suggestions concerning their experience of careers guidance.

69.6 per cent of pupils appeared to need more careers guidance. The following were some typical comments:

> In order to gain enough careers information we should go out and do as much as we can, and investigate as much as possible. (S5, girl, School C, high academic standard school).
>
> I would like more information about less well known/obscure careers. (S6, boy, School B, mixed academic standard school).
>
> I changed my careers plans many times. When I found out more about a job, I thought I would not like it. (S4, boy, School A, low academic standard school).
>
> I had not had much experience of careers guidance and I would appreciate more. (S4, girl, School A, low academic standard school).
>
> I think widening peoples' careers choices/options is very important. (S5, boy, School C, high academic standard school).
>
> I strongly feel that, instead of only one chosen work experience, you should have the chance to experience different jobs. (S4, girl, School A, low academic standard school).

3. The requirements of careers officers

In order to explore whether careers providers can give effective careers guidance to school pupils, careers officers were asked to write down the major problems of careers guidance in their schools, and to make suggestions for improving school careers guidance.

According to the careers officers' comments, there are several barriers hindering the provision of careers guidance for young people.

<u>Lack of gradual careers guidance programme</u>

Young people often change their career aims when they obtain more careers information and get to know themselves better. However, some school careers guidance cannot meet pupils' needs because there is no systematic careers guidance programme. Some careers officers gave the following suggestions:

> Careers guidance should start earlier to introduce careers gradually.
>
> Schools should have a careers guidance programme from S1 to S6. This work should not be interrupted.
>
> Careers guidance should be a process, not a one-off interview.
>
> In the curriculum, no time has been allocated to pupils to pursue careers guidance.
>
> The major problem of school careers guidance is to provide and maintain a good careers library.

Lack of communication between careers officers and guidance teachers

Careers officers are responsible to school pupils for providing careers counselling. A careers officer normally works in a school one day each week. A pupil normally gets the chance of one interview a year with the careers officer, which does not give the careers officers enough time to impart the careers guidance that each pupil really needs. The school guidance teachers have no time to participate in this work because of the pressures of other school work. So some careers officers complained:

> Guidance teachers have difficulty getting time out with careers officers for familiarisation/review of careers materials supplied by Lothian Region Careers Service for most year groups. Schools should allocate guidance teachers more time for training/reviewing careers materials with careers officers.

> The major problem of careers guidance in my school is the liaison with the guidance teachers. Their workload is increasing and they are not able to spend time with us regularly to co-ordinate our work and give us background reports on clients. ... The pupils are sometimes sent for a guidance interview with no idea why.

Lack of communication with pupils

Many careers officers agree that young people do not get enough careers guidance at present, because careers officers and pupils do not spend enough time with each other.

> School has no coherent careers guidance programme. ... The major problem is the difficulty of pupils obtaining access to information. School should have a centrally located resource base which includes careers' materials which can be easily accessed.

> The major problem of careers guidance is dissemination of careers information. The profile of careers guidance is low. We get to see most pupils at a fairly late stage and sometimes an interview turns into a careers guidance programme.

> The only possible way of improving school careers guidance is to make 'careers' a distinct subject on the timetable.

Lack of communication with parents

Parents play an important part in their children's careers choice. However, there is not enough communication with parents on the subject of school careers guidance. The following is a typical comment from a careers officer:

> If we want to improve careers guidance, we should have more work with parents.

Lack of communication with other careers officers

School careers guidance is very complex work. Careers information both increases and changes so rapidly that careers officers cannot always give

pupils wise advice if they themselves do not continue to gather new information and to learn new careers counselling skills. Careers officers need to exchange experiences and discuss special cases with each other in order to improve their careers service. As one careers officer commented:

> We have not any chance to communicate with other careers officers. I think it would be useful for us to exchange experience in order to improve our careers service.

4. Evaluating methods of school careers guidance

In order to evaluate the influence of school careers guidance methods on pupils' careers choices, pupils were asked to write down the reasons why they changed their career aims from S1 to S6, and to write down some comments about their experience of school careers guidance methods. Six school careers guidance methods, which influenced pupils' careers choices, were mentioned in the survey: careers visits, work experience, careers days, careers libraries, computer-assisted careers guidance and information, and careers counselling. Three informal routes, talking to working people in occupations, T.V./films/novels and the school curriculum (curriculum preferences), also influenced pupils' careers considerations.

Careers visits

Careers officers and guidance teachers organise visits by pupils to industrial/commercial premises. Visits can be of general interest, or with a specific objective.

Careers visits can help young people get first-hand and up-to-date careers information and evaluate personal vocational interests and abilities. Here are some comments from pupils after undertaking careers visits:

> I wanted to be a nurse from S1 to S4. Then in S5 I saw what happened in a hospital when a relative of mine was in for a long time. This made me rethink my future career. (S5, girl, School B, mixed academic standard school).
>
> My sister studies in the architecture department and I got a chance to visit her department. I found this a very interesting subject. (S6, girl, School C, high academic standard school).
>
> A visit to the RAF officer changed my careers aim from engineer to pilot. (S4, boy. School A, low academic standard school).
>
> My two days' college visit changed my views on my career. I would prefer to be a builder than a joiner. (S4, boy, School A, low academic standard school).

Careers visits are a very useful way for young people to gain up-to-date and first-hand careers information. However, pupils do not get the chance to spend much time on each visit. If a careers visit has not been well organised and explained, pupils can get careers information with a bias. For example, a pupil visiting a nursery school found that all the children were well occupied. What he or she did not realise was how difficult it was to manage these children at the beginning of the school day.

Work experience

All pupils in these three schools participate in work experience in S4. Work experience is a 1-2 week period spent on an employer's premises. During the placement pupils are required to observe people at work and try out different tasks involved in a particular job. Work experience is to help pupils understand how their skills relate to jobs, and help them start to think about their future careers.

There are six aims of work experience for pupils: building up confidence in dealing with new situations outside school; getting to work with adults and

being treated as an adult; learning some of the problems of changing from a pupil to a worker; finding out what will be expected as an employee; finding out if a job is really the way they thought it would be; finding out about the employers whom they might apply to in the future (Lothian Region Careers Service, 1994c).

Work experience is to help pupils think about their future life, but not to help them make a specific careers decision. However, pupils hope that work experience will help them make careers decisions. 11.8 per cent of pupils mentioned that work experience changed their career aims.

> Work experience in a primary school made me decide to be a primary school teacher. (S5, girl, School B, mixed academic standard school).
>
> In S4 I wanted to work in a bank. But after work experience I no longer wanted to be a bank clerk, as it was a very boring job. (S5, boy, School B, mixed academic standard school).
>
> My work experience in S4 made me realise that I couldn't manage a career as a nursery nurse because of my lack of imagination to keep children occupied. (S5, girl, School A, low academic standard school).
>
> When I was on a week work experience, I did radio for the four days. I learned how to use the equipment and how to put a radio show together. It was really the only thing that has got my attention. I would like to be a music producer or radio DJ. (S6, boy, School B, mixed academic standard school).

Work experience is regarded as a very helpful activity by pupils in careers guidance in this survey (see later), as it allows young people to get first-hand experience of a career. Work experience does not aim to help pupils make careers decisions, but many pupils hope that it will do so. Negative work experience can cause a pupil to change his or her career aim. Some found that the occupation that they would like to follow was a disappointment after

work experience. Schools could not then provide another chance for pupils to have work experience in another occupation. This may be explained by the fact that many pupils would leave their schools after S4 and they would be facing employment and educational options after a few months. In the light of this situation, many pupils hope that work experience will help them make careers decisions.

Careers days

Careers days are designed primarily to provide pupils with careers and vocational information directly from those actively involved in particular occupations. The more information pupils have, the more realistic their educational and careers decisions will be.

The present author observed a careers day, called Job Opportunity 94, which was a large scale careers day organised by Edinburgh Careers Service in March 1994. The purpose of this Careers Day was to provide an opportunity for pupils who were leaving school shortly to meet representatives from a wide range of employers and training providers. Over 75 organisations were represented at Job Opportunity 94.

There were over 75 counselling desks that were very well arranged by different organisations. Each organisation provided pupils with free brochures about the kinds of jobs and their training. The representatives took time to answer pupils' questions. Some organisations used videos to attract pupils. The pupils could get first-hand, up-to-date careers information.

However, Job Opportunity 94 had some shortcomings. First, although all school pupils of S4, S5 and S6 were notified about this careers day, only about 55 per cent of the total was estimated to have attended. Parents play an important role in their children's careers decisions and guidance teachers

have responsibilities to help careers officers develop careers guidance programmes. So occupational information is very important for both parents and guidance teachers to help their children/pupils make careers decision. But most parents and school guidance teachers were not present.[1]

Second, each pupil was allowed about one hour at Opportunity 94, which was not enough time for him/her to gather sufficient careers information.

Third, all representatives emphasised the benefits of their companies, and did not mention the tougher aspects of the job. For example, the representatives of British Airways stressed the salary and other benefits of being an air hostess, and the representatives of Hairdressing told pupils that they would guarantee them jobs after training.

Although Job Opportunity 94 delivered a lot of up-to-date careers information to some pupils, this method might be improved to provide more young people with more unbiased careers information (see later).

Careers libraries

The majority of secondary schools in Edinburgh have set up a small careers library within the school library. According to the observations of the present author, careers libraries normally include three types of careers material:

(1) Careers information: Occupations (1993); Jobfile (1993); Job Book (1992) and some other careers booklets.

(2) Information on subjects in universities and colleges.

(3) Careers video tapes, such as Building, Fashion, the Insurance Company, the Travel Company, the Banking Business, the Retail Business, Food Retailing, Hairdressing, Nursing, Glasgow College, etc. Each cassette lasts about 20 minutes.

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[1] Author's observation.

In most schools the pupils from S2 to S6 have access to their careers libraries. However, many school careers libraries are not attractive to pupils, as the written materials are similar to occupation dictionaries. It is very hard for young pupils to read occupation dictionaries. Libraries do not have enough up-to-date careers material, such as the free careers brochures that were provided at Job Opportunity 94. Careers videos are also not very attractive to pupils as their content is not nearly as exciting as T.V. programmes. Moreover, the number of videos is usually limited, and they are not always available.

Computer-assisted careers guidance and information

The computer has been used to provide careers guidance and information since the 1970s. JIIG-CAL (Job Ideas and Information Generator - Computer-Assisted Learning), designed by the Careers Research Centre, Edinburgh University, is the most widely used computer-assisted careers guidance and information system in the UK. The version of this programme (1991) is used by the majority of secondary schools and careers offices in Edinburgh.

In order to assess the value of computer-assisted careers guidance and information, the pupils were first of all asked if they had used computer-assisted careers guidance programmes. Surprisingly, of 375 pupils only 23 said they had used JIIG-CAL, and one pupil had used Centigrade. None of the 163 pupils in the selected private school had used JIIG-CAL. Only some able pupils, mainly in S5 and S6, in the two selected state schools had had the chance to use JIIG-CAL.[2] The majority of pupils had not used computer-assisted careers guidance programmes.

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[2] Interview with the two careers officers in these two selected schools.

The 23 pupils who had used JIIG-CAL were further asked to state how much they had enjoyed using it: a great deal, a little or not at all. The results are revealed in Table 8.2 below.

Table 8.2. The degree to which pupils enjoyed JIIG-CAL

JIIG-CAL	Number	Percentage
A great deal	2	8.7
A little	17	73.9
Not At all	4	17.4
Total	23	100

Table 8.2 shows that 23 pupils in the survey used JIIG-CAL. Seventeen pupils said that they enjoyed it a little.

These 23 pupils were further asked how useful they found JIIG-CAL in making a careers choice. The results are shown in Table 8.3 below.

Table 8.3. The usefulness of JIIG-CAL to pupils in making a careers choice

JIIG-CAL	Number	Percentage
Very useful	3	13.1
Quite useful	9	39.1
Not very useful	9	39.1
Not useful at all	2	8.7
Total	23	100

Table 8.3 shows that about half of the pupils found JIIG-CAL very useful or quite useful, but the other half thought that JIIG-CAL was not very useful or not useful at all.

In order to find out why pupils had such differing views about JIIG-CAL, we asked them to write down the reasons for their views. The answers can be divided into two types: positive replies and negative replies.

(1) Positive replies (12 pupils)

These pupils thought that JIIG-CAL was helpful. There were two reasons for this:

a. JIIG-CAL can provide careers information and job ideas.

> The system provided printouts that gave information I couldn't get elsewhere in the school.
>
> It told me what qualifications I needed for the occupations that I was interested in. So it was useful.
>
> It helped me to see where my interests lay and what jobs I could be good at.
>
> It gave me an idea of things I could consider doing when I leave school.

b. JIIG-CAL can help to back up a careers choice.

> It told me I was interested in Physical Education and Art, that gave me more confidence to go for it.
>
> It proved I am suited to be a nurse which gave me more confidence.

(2) Negative replies (11 pupils)

These pupils held that JIIG-CAL was unhelpful for their careers choices. There were three reasons for this:

a. JIIG-CAL cannot make realistic suggestions.

> It opened my mind to a wider range of jobs but some of them were not helpful. For example, it suggested that I would make a very good T.V. announcer or publisher. But the competition for both of these is so fierce that I felt kind of let down when I discovered the unlikelihood of jobs in these areas.
>
> It suggested careers I would never dream of doing but it did widen careers options a little for me and get me to think about careers.

b. JIIG-CAL cannot affect a pupil's choice of career.

> I already knew what I wanted to do so the computer was not much help although it was quite close to what I wanted to do.
>
> It was not very useful because I have already made up my mind.

c. JIIG-CAL cannot provide foolproof advice.

> I had already decided I wanted to be an architect. It said I should be a bus driver or a forester, both of which I detest.
>
> It gave you completely the wrong job suggestions, although details can be mildly interesting.
>
> It came up with jobs I'd never even heard of which I could never do in a million years.
>
> Nearly every job that was printed for me was a waste of time because I was not interested in them.

The results show that the majority of pupils enjoyed JIIG-CAL only a little. The advantage of JIIG-CAL is that it can provide a wide range of careers information. However, JIIG-CAL sometimes gives pupils unrealistic advice.

To understand why some pupils are given unrealistic careers advice by JIIG-CAL, it is necessary to examine its content.

JIIG-CAL provides careers guidance in two stages. The first stage concentrates on identifying a pupil's general level (unskilled, skilled, professional, graduate, etc.) and the type of occupation likely to suit a particular pupil. This is done through the JIIG-CAL Occupational Interests Guide.

The second stage encourages pupils to consider a range of other factors, such as desired place of work, hours, physical conditions, training, study, etc. Pupils state their preferences, and their answers are fed into the computer programmes.

The system compares the pupils' requests with details of jobs stored in the JIIG-CAL JOBFILE, which contains information on about 600 jobs and is published by JIIG-CAL Ltd. The system then selects the 20 jobs which seem best suited to a particular pupil.

According to JIIG-CAL, each pupil is offered the 20 most suitable jobs. Information on these jobs is then printed out for the pupil to follow up and discuss with the careers adviser. It is very important for careers advisers to explain the results of JIIG-CAL properly to a pupil.

In the author's view, there seem to be three limitations. First, the content of the JIIG-CAL programme only matches personal interests, not personal vocational abilities, with job requirements. However, personal vocational ability is a very important factor for pupils to think about in relation to possible jobs. JIIG-CAL does not give pupils the chance to explore their vocational ability in order to choose suitable occupational levels.

Second, some questions aimed at assessing pupils' vocational interests seem to be difficult for pupils to answer. For example, the questionnaire asks pupils to say whether they like, do not mind, or dislike the idea of risk at work, in the form of danger, accidents, etc. This item, in my opinion, cannot be separated from the whole work environment of an occupation. If faced with the choice of two jobs with the same work environment, salary, promotion prospects and job opportunity, most people would choose the job with no risks attached. If a person does not mind working in poor conditions, he/she will have more job opportunities. But JIIG-CAL provides all users with the 20 most suitable jobs.

Third, the work environment might not be standardised. For example, the jobs of both chemical laboratory technician and soldier are categorised as having some degree of risk. But the degree of risk is very different. A person might not want to be a soldier because of the danger involved, but we cannot say that for the same reason he/she would not want to be a chemical laboratory technician. These three limitations may be the reasons why JIIG-CAL sometimes offers pupils unrealistic advice.

In view of these limitations of JIIG-CAL it is very important for careers officers to explain the results of JIIG-CAL properly to pupils. If a careers officer does not understand the advantages and disadvantages of JIIG-CAL, he/she could give pupils the wrong advice.

The following case was observed by the present author:[3]

A careers officer used JIIG-CAL to help a girl choose her jobs. Her Answer Sheet read as follows:

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[3] This case may be exceptional, but it is mentioned here just to underline the possibility that, occasionally, confidence in the computer can be excessive.

> Like advising/counselling work, wearing smart/tidy clothes, sitting and travelling activities. Dislike poor work environment.
>
> Health problem: Eyesight dyslexia.

The results of the Occupational Interest Inventory were as follows :

> You would very much like doing things where you have to be good with words, such as performing in plays or films, T.V., etc.; writing instructions and information or describing things; talking to people, asking and answering questions and giving information; guiding people on tours and telling them about places of interest.
>
> You would also like caring for people in need and finding housing and work for them; helping people with emotional or financial problems; nursing the physically or mentally ill; training disabled people and teaching them new skills; organising play and recreation.
>
> Suitable jobs: Journalist/reporter; translator/interpreter; diplomatic officer; writer/author, counsellor, etc.

The girl was very excited by these results. She kept saying: "It's amazing. I would really like to be a writer or journalist. But I have dyslexia. Even something in writing and reading that a baby can do, I cannot do. So can I really do this kind of job?" The careers officer answered: "Yes, the computer does not lie." The girl still doubted: "I am afraid I am not qualified to do this kind of job." The careers officer said: "You can go to college to study some related courses." This girl seemed very happy and asked: "Then, where can I get that job?" The careers officer showed her JIIG-CAL Jobfile and let her read more information about these jobs herself.

The careers officer, in my opinion, gave the girl unrealistic advice. She may have over-believed the function of the computer. In fact, computer-assisted careers guidance and information can only provide some reference information, and cannot replace face-to-face careers counselling between a

careers officer and a client. This careers officer was obviously insufficiently experienced to handle special cases.

Careers counselling

Careers counselling is one of the main methods used to help a pupil solve his or her own careers problems. In Edinburgh careers counselling uses individual counselling, which is conducted by careers officers in state schools and by careers teachers in private schools.

Pupils can make appointments with careers officers or careers teachers to discuss their careers problems. In the selected low academic school, the careers officer found it hard to develop a systematic counselling plan because the majority of pupils have very low academic achievements and low aspirations, and therefore very limited job choice. Many boys can only get a job such as construction worker, while girls get jobs like childminder and hairdresser. Pupils only wanted to know about these jobs during counselling. The following is a typical comment from a boy pupil.

> My careers officer tries to help me consider my future career. But it is a waste of time because I do not think I would have freedom to choose my future job. If I am lucky, I can get a job as a construction worker. Otherwise I would be unemployed. (S4, boy, School A, low academic standard school).

This careers officer aimed to interview all S4 pupils at least once before they left school, but it was hard to achieve this because of his or her heavy workload.

In the selected mixed academic school, a careers officer visits for careers counselling half a day each week. In the selected private school, two careers teachers normally work half a day each week in the careers office. So pupils would not get enough chance to meet careers officers.

> School careers guidance is not enough. There was only 1 interview. (S4, boy, School B, mixed academic standard school).
>
> I am in 5th year and have never been given an interview with the careers officer. (S5, girl, School B, mixed academic standard school).
>
> Careers teachers do not know us personally. There is no one who understands our interests and capabilities enough to help us make informal choices over careers. They can only offer general advice. (S5, boy, School C, high academic standard school).

Therefore, individual counselling in these three schools is not often available for pupils. Because careers officers/careers teachers only have one chance to meet individual pupils, they cannot set up a systematic counselling programme. It is obvious that pupils need more opportunities to meet careers officers. Especially for low academic pupils more careers guidance might open their eyes to more diverse job possibilities, such as supermarket shelf stacker, railway porter, general labourer, messenger and many other partly skilled opportunities.

5. Other influences on pupils' careers choices

Talking to people in occupations

When young people are faced with a careers choice, they sometimes try to talk to people who work in certain occupations.

> I turned away from accountancy because, when talking with a friend who has studied this subject for a year at university, he informed me that he found it to be a great bore. (S6, girl, School C, high academic standard school).
>
> I would like to be a personnel manager. This is because my mum's friend does this job. She told me that this is a very interesting job. (S5, boy, School C, high academic standard school).

> My uncle works in the stock exchange. Talking with him made me want to do this job. (S4, boy, School B, mixed academic standard school).
>
> My friend told me that working in front of a computer is the world's most boring job. (S5, girl, School B, mixed academic standard school).
>
> My brother works in an office. He said: 'Don't work in an office because it is boring being stuck in an office all day'. (S4, boy, School A, low academic standard school).

Young people would like to gain careers information through talking to people who work in particular occupations. This is a quick way to find out about a job. However, the information is sometimes biased and inaccurate, because many working people can only relate their occupation to their own interests and abilities. For example, a computer operator complained that his job was very boring and said he wasted the whole of his life before a machine (computer). Another computer operator may have found his job very interesting.

T.V., films and novels

Young people like to watch T.V./films and read novels, because the contents of each and the way in which they impart information are often more interesting than school textbooks and careers materials. T.V./films/novels often influence young peoples' careers choices automatically. Here are a few typical answers:

> Laser research -- I would like to be a laser researcher. I read a book on this subject and became interested in this career. (S6, boy, School C, high academic standard school).
>
> Fireman -- I want to be fireman, because of reading, T.V., and newspapers. (S4, boy, School A, low academic standard school).

> A T.V. programme on the job of a nursery nurse made me want to work in this job. But many people told me how children cried all the time. So I changed my idea from nursery nurse to hotel worker. (S5, girl, School B, mixed academic standard school).

T.V./films/novels can provide careers information in an exciting way. However, they can sometimes give pupils unrealistic career aims without guidance. For instance, many boys in S1 would like to be aeroplane pilots after watching films or reading stories about pilots. But few of them will eventually get the chance to become pilots. T.V./films/novels may also provide one-sided careers information. For example, the noise and dust in a factory are unlikely to be shown in a careers video.

School curriculum

Some pupils consider jobs related to the subjects they are good at. For example, if a pupil is good at mathematics, he or she may want to be a mathematician or an accountant. Performance in school subjects has an important influence on pupils when making careers decisions.

> Success in Accounting and Economics led me to believe that I was best at these subjects and that following up a career in this way would be best for me. So I would like to be an economist or a banker. (S6, boy, School C, high academic standard school).

> Basically, it was what subjects I enjoyed the most and I would choose the jobs in this field. (S4, girl, School B, mixed academic standard school).

> The reason why I changed my mind from wanting to be a motor mechanic to wanting to be a builder is the course 'Life and Work'. This course taught me about other jobs. (S4, boy, School A, low academic standard school).

> In S1 I wanted to be a doctor and I held on to that idea until S2 because it still appealed to me. In S3 I changed my mind because

the subjects I had taken had given me new ideas about jobs. (S5, girl, School B, mixed academic standard school).

The school curriculum provides some careers information. However, such information is very narrow and given without guidance. For instance, some pupils who were good at mathematics thought that they could only be mathematicians or accountants; they did not know that there are many jobs related to this subject such as architect, bookkeeper, actuary, machinist, electrician, dentist, forester, insurance salesperson, surveyor, and many others.

6. The relative helpfulness of each careers guidance method

The pupils were asked to rate the relative helpfulness of a range of activities concerned with careers choices. Each was rated according to three degrees of helpfulness: a lot of help, some help, no help, and not applicable. The results are shown in Table 8.4 below.

Table 8.4. The mean, standard deviation and ranking of the activities from which pupils get help in making careers decisions

Activity	Mean	SD	Rankings
Work experience	1.77	0.79	1
Careers counselling	2.01	0.69	2
Life and Work (course)	2.07	0.73	3
Careers library	2.12	0.65	4
Careers day	2.20	0.74	5
Vocational ability test	2.27	0.73	6
Vocational interest test	2.41	0.68	7

Mean 1 = A lot of help 2 = Some help 3 = No help

Rankings 1 = Most helpful to 7= Least helpful

School careers guidance activities can be classified into three types. The first type of activity helps pupils understand occupational requirements, such as work experience, "Life and Work" and careers counselling. The second type helps pupils gather careers information, such as careers libraries and careers days. The third type helps pupils get to know themselves better, such as interest tests and ability tests.

Table 8.4 shows that the first type of activity is the most helpful in terms of making careers decisions. This may be explained by the fact that this type of activity helps pupils to explore their future careers in occupational circumstances. The second types of activity do not appear to offer much help to pupils when making careers choices. This suggests that although careers information and the skills required for job applications are useful, these two aspects do not in themselves help young people make careers decisions. Similarly, vocational tests do not seem to be very helpful as careers guidance methods, perhaps because the pencil and paper tests only provide information on personal characteristics.

7. Occupations considered by pupils

All the pupils in this survey were asked to write down the specific occupations that they had considered in each secondary school year.

It is very interesting to find that they mentioned only the following 45 occupations:

> Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, scientist, occupational therapist, vet, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, fireman/firewoman, soldier, air hostess, chef, shop assistant, industrial worker, construction worker, driver, childminder, postman/postwoman, hairdresser, pilot, painter

and decorator, masseur/masseuse, care assistant, home help, computer operator, social worker, radiographer, leisure worker, counsellor, lifeguard, librarian, fisherman/fisherwoman, animalminder and courier.

Although there are thousands of different occupations, pupils only considered these 45.

It is interesting to examine the range of pupils' occupational considerations in each secondary school year.

37 jobs were mentioned by pupils when they chose their future occupations in S1.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, scientist, occupational therapist, vet, designer, manager, teacher, nurse, technician, accountant, clerk, policeman/policewoman, fireman/firewoman, soldier, air hostess, chef, shop assistant, industrial worker, construction worker, driver, childminder, postman/postwoman, hairdresser, pilot, home help, computer operator, social worker, animalminder, fishman/fishwoman, lifeguard and courier.

33 jobs were mentioned by pupils when they chose their future occupations in S2.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, occupational therapist, vet, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, fireman/firewoman, soldier, air hostess, chef, shop assistant, industrial worker, construction worker, driver, childminder, hairdresser, pilot, painter and decorator, computer operator, counsellor and lifeguard.

36 jobs were mentioned by pupils when they chose their future occupations in S3.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, occupational therapist, vet, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, fireman/firewoman, soldier, air hostess, chef, shop assistant, industrial worker, construction worker, driver, childminder, hairdresser, pilot, painter and decorator, care assistant, computer operator, social worker, radiographer, counsellor and lifeguard.

35 jobs were mentioned by pupils when they chose their future occupations in S4.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, occupational therapist, vet, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, fireman/firewoman, soldier, air hostess, chef, shop assistant, industrial worker, construction worker, driver, childminder, hairdresser, pilot, painter and decorator, computer operator, social worker, radiographer, leisure worker, counsellor and lifeguard.

30 jobs were mentioned by pupils when they chose their future occupations in S5.

Scientist, lawyer, doctor, artist, sportsman/sportswoman, architect, author, occupational therapist, vet, designer, manager, businessman/businesswoman, teacher, nurse, technician, accountant, clerk, policeman/policewoman, fireman/firewoman, soldier, chef, shop assistant, construction worker, driver, childminder, computer operator, social worker, radiographer, counsellor and lifeguard.

It can be seen that the majority of young people have had occupational considerations from S1. But the range of careers considerations for pupils is very narrow and, surprisingly, no pupils chose the job of engineer.

Pupils' range of job considerations is mainly shaped in S1. As they progress, pupils' range of job considerations does not become wider. As they advance

at school, pupils drop certain low level jobs, such as home help, care assistant and postman/postwoman.

This narrow range may be explained by the lack of occupational information. Therefore, school careers guidance should provide pupils with more careers information to enlarge their range of careers choices.

8. Discussion

The survey shows that careers guidance is highly necessary for secondary school pupils. Although the three aspects of careers guidance - knowing oneself, learning about occupations and making wise careers decisions - are all important, occupational information is considered the most important requirement for pupils. Careers officers call on schools to give them more support in developing careers guidance. They need to have more access to pupils, guidance teachers and parents in order to implement more effective careers guidance.

Therefore schools should develop a careers guidance programme to provide pupils with careers guidance in a systematic way without interruption throughout the secondary school years.

Because there is a proliferation of new occupations in the labour market, especially in the white-collar and service areas, careers officers need the chance to exchange their experiences of careers guidance, and to gather new careers information. They might also attend a training course.

Schools should provide careers guidance relative to the specific needs of young people before they leave school. For example, a pupil of low academic

achievement needs careers information on jobs with lower academic requirements.

Although there are thousands of jobs, young peoples' careers choices tend to be limited to less than 45 known occupations. These jobs can be grouped according to the skills required to do them. For example, the popular book of careers information, *Occupations 94,* contains details of 600 jobs from unskilled to professional work. These 600 jobs are grouped into 25 job areas according to similar background. A better school careers guidance could give young people detailed information on one or two specific occupations within each job group and then a brief introduction to other related jobs. In addition, information on more jobs should be given to pupils in order to enlarge their careers considerations.

Schools provide careers guidance mainly through five methods. Each of these methods has its advantages and disadvantages as follows.

Careers visits are a very useful way for young people to gain careers information. However, if a careers visit has not been well organised and explained, pupils can get careers information with a bias. In order to help pupils gain unbiased careers information, careers visits should be organised in three stages: preparation, the visit itself, and feedback discussion. In the preparation stage, careers providers should give a detailed outline of the careers visit. The outline should include: the name of the occupation, duties of the occupation, the process of work, physical demands and conditions, personal qualification requirements, social and psychological factors, preparation required, special requirements, methods of entering, wages, advancement possibilities, future outlook, related occupations, training courses, and any additional relevant information. This outline should also be sent to representatives of the companies being visited. During the visit pupils

should be asked to try to observe the points made in the careers outline. After the visit, there should be a feedback discussion with pupils. Careers officers might provide additional information about the job visited.

Work experience is regarded as the most helpful kind of careers guidance for pupils. The reasons behind work experience are to help pupils understand the process and content of a job, and how their skills relate to certain jobs, and encourage them to start thinking about their future careers. Work experience is not intended to help pupils make careers decisions. However, many pupils in S4 make their careers decisions or change their career aims based on work experience because they are about to leave school. When a pupil is satisfied with his or her work experience, he or she tends to choose that job as his or her career aim. However, some pupils have negative work experience, and, as that is their only chance before leaving school, they often lose interest in a career. Howieson and others (Howieson et. al, 1993) found that work experience helps to reduce pupils' uncertainty about manufacturing. They proposed that personal experience of a work environment (whether manufacturing or not) through work experience might give pupils a more positive attitude.

Therefore, work experience might start in S3 and each pupil might be given more than one opportunity. After the first work experience young people should have an organised discussion on their experiences. Thus they could share specific careers information with other pupils. If a pupil has a negative work experience, he/she should get the chance to try a different occupation.

Computer-assisted careers guidance and information programmes are an interesting way to provide careers guidance and information. JIIG-CAL has information on 650 occupations and can store and retrieve a vast mount of information. It is very helpful for pupils in that it can give them careers ideas.

However, some of the limitations of computer-assisted careers guidance and information might be considered by the users. First, JIIG-CAL cannot examine each individual's abilities, values and needs. A person's abilities are a very important factor in assessing his/her job opportunities. For example, people with a high level of language competence (speaking, reading, writing) have a better chance of finding jobs that deal with people.

Second, JIIG-CAL divides work environments into simple categories, whereas in reality each occupation has a different environment. For example, both nursery schools and factories are noisy, but the noise of the former is made by children whereas the noise of the latter is made by machines. A person may not mind the noise of a nursery school but may dislike the noise of a factory, but he/she cannot distinguish between the two when asked by JIIG-CAL to categorise noise according to: like, do not mind, dislike.

Third, JIIG-CAL offers each pupil the 20 most suitable jobs. However, if a pupil of low academic achievement wants a job with a good work situation, his/her job choice will be very narrow. In fact, none of the 20 most suitable jobs may be realistic at all.

JIIG-CAL can therefore only provide reference information. It cannot really match peoples' characteristics with occupational requirements. However, careers choices are highly individual and one job is different from another. The computer, though very helpful, cannot replace the careers guidance and careers information service. If a careers adviser places too much faith in the function of JIIG-CAL, he/she may mislead young people in their choice of careers. Careers advisers should understand both the advantages and limitations of JIIG-CAL and give pupils proper explanations of JIIG-CAL results.

Careers days, such as Job Opportunity 94, are an effective method of imparting a great deal of up-to-date, first-hand careers information in a very short time if they are well organised. However, Job Opportunity 94 was not as well organised as it might have been. First, about half of the pupils were absent and thus missed a good chance to gain careers information. This was because schools may not have insisted that their pupils attend the careers day.

Second, most of the parents were not present at this careers day. Parents, as we know, play a very important role in their children's careers decision-making. However, parents may tend to communicate with guidance teachers, not with careers officers, and the careers day was organised by careers officers. Therefore, although parents were allowed to attend this careers day, they may not have been informed about how useful it could have been for their children.

Third, careers officers did not take the opportunity of collecting occupational booklets for their school careers libraries, which could then be delivered to other pupils.

Fourth, company representatives presented only the good aspects of their companies and avoided mentioning the difficult aspects of their jobs. In this way representatives attracted young people to apply for their jobs. Careers days should be followed up by discussions between careers officers and pupils so that careers officers could pass on supplementary information. Therefore, careers days might involve careers officers, pupils, parents, school administrators, guidance teachers, support staff and organisations. Schools should arrange for all pupils to attend careers days and parents might be encouraged to come along with their children. Careers officers might prepare detailed guidelines of occupations for pupils in order to help them collect and analyse careers information. All careers officers ought to make use of careers

days to collect up-to-date careers information and pass it on to other pupils. There might be a discussion between careers officers, guidance teachers and pupils after each careers day.

Careers libraries are a good source of information for pupils. However, careers libraries need to be improved, and need to maintain a wide range of up-to-date careers material. However, careers officers, school guidance teachers and school librarians should co-operate to maintain a good careers library, as careers information is increasing and changing rapidly in the modern world. Schools should keep in contact with local employers and vocational training centres in order to gain free and up-to-date careers material. Pupils always need up-to-date careers information, which could perhaps be supplied by computers in careers libraries. In addition, the content of careers video tapes should be improved. They should introduce not only the good features of an occupation, but also its difficult aspects. If certain aspects of an occupation cannot be shown on film, careers guidance providers should provide some additional oral explanation.

Careers counselling is the main way to solve a pupil's own careers problems. However, a pupil normally has only one chance to meet a careers officer/careers teacher in a half-hour interview, which is not long enough. Careers officers/careers teachers need time to understand their pupils' interests, abilities and values in order to give suitable careers suggestions.

As well as these seven methods of school careers guidance mentioned above, there are three other routes that influence pupils' careers choices. First, T.V./films/novels provide careers guidance in an interesting way. However, information from these sources can give young people unrealistic career aims without guidance. Second, young people would like to talk to people who work in particular occupations. This is a quick way to find out about a job.

However, the information is sometimes biased and inaccurate, because many working people can only relate their occupation to their own interests and abilities. Third, a number of pupils' careers choices are based on their preferences and achievements at school. Although this is a good starting point, pupils should be made aware that an ability in one subject can open up opportunities in a number of related fields.

In addition, it has been found that young peoples' careers considerations were limited to less than 45 occupations. More than 50 per cent of young peoples' career aims fell within 10 occupations. At the early stage (S1 or S2) pupils' range of occupational considerations have been shaped. Therefore, school careers guidance should create more chances to explore wide range of occupations at that early stage in order to give them a broad range of career aims.

CHAPTER 9

A COMPARATIVE ANALYSIS OF PUPILS' EXPERIENCE AND PERCEPTION OF CAREERS GUIDANCE METHODS IN SHANGHAI AND EDINBURGH

Chapter 9: A Comparative Analysis of Pupils' Experience and Perception of Careers Guidance Methods in Shanghai and Edinburgh

The purpose of the previous two chapters was to analyse the methods of careers guidance in Shanghai and in Edinburgh. This chapter will compare the results.

1. The kinds of help required by pupils from careers guidance

The three kinds of careers guidance - self-knowledge, occupational information and the ability to make a careers decision - are very necessary for pupils in both Shanghai and Edinburgh (mean < 2). School careers guidance needs to be improved to meet pupils' needs.

Shanghai pupils appear to have a greater need for self-knowledge than Edinburgh pupils (mean = 1.38 for Shanghai pupils and mean = 1.77 for Edinburgh pupils). This may reflect the degree of change in the labour market in Shanghai, where many new occupations are appearing with the development of international business. Jobs in business are attractive to young people because of the benefits and challenges they provide. But there is high competition and a degree of risk in business. For this reason Shanghai pupils would like to know whether they are capable of doing a job in business. In Edinburgh, pupils seem to be less concerned about understanding their own occupational abilities.

Pupils in both Shanghai and Edinburgh rank careers information as an important requirement when choosing a career (mean = 1.47 for Shanghai

pupils and mean = 1.52 for Edinburgh pupils). This suggests that pupils do not get enough careers information and that schools should provide more.

2. The requirements of careers guidance providers

Careers providers in both Shanghai and Edinburgh call for improvements in school careers guidance. First, schools in both Shanghai and Edinburgh should set up gradual careers guidance programmes throughout the whole secondary school in order to guarantee that careers guidance is implemented systematically and continuously. Second, in Edinburgh careers officers need more access to schools to communicate with guidance teachers, pupils and parents. In Shanghai guidance teachers need more work time to give pupils careers counselling. Third, careers providers need to exchange experiences and discuss special cases with each other, because careers guidance is very complex and individual work. It is difficult for a careers provider to solve all kinds of careers problems without the help of other careers providers.

In Shanghai, because there is no careers information unit, guidance teachers lack educational and vocational information. It is difficult for them to collect careers information by themselves directly, and this in turn brings about problems in developing careers guidance effectively.

3. Evaluating methods of school careers guidance

Careers days are popular in both Shanghai and Edinburgh. At them pupils can meet representatives from many different institutions and they can gather a lot of careers information in a short time. However, there are a number of differences between careers days in Shanghai and Edinburgh. First, careers days in Shanghai are held on Sundays to give parents and

grandparents a better chance to attend. Pupils can therefore discuss their careers choices with representatives, parents and grandparents. But careers days in Edinburgh are held on weekdays when most parents are unable to attend. Second, careers days in Shanghai are open all day for pupils, parents and grandparents, giving everyone plenty of time to gather information. However, pupils in Edinburgh are only allowed one hour at the careers day, which is insufficient time to collect information. Third, careers officers in Edinburgh treat careers days as an opportunity to talk to representatives and gather careers information, while guidance teachers in Shanghai miss this chance altogether. In neither Shanghai nor Edinburgh did careers providers collect careers booklets for pupils. Nor did they organise meetings with pupils after the careers days to discuss and evaluate the information that the pupils had gathered. Pupils tend to get rather biased careers information from careers days because representatives highlight the benefits of occupations.

Shanghai schools concentrate on careers interest groups and competitions to help pupils explore their careers paths, while Edinburgh schools encourage work experience. Careers interests groups can help pupils explore a few occupations by acting them out, and pupils are free to choose and change their careers interest groups according to their preferences. Competitions can help pupils gage their talents in order to make wise careers choices. But careers interest groups and competitions are not based on the local labour market and pupils' possible careers choices, so these two types of activities may not be very realistic. Work experience in Edinburgh can help pupils learn about an occupation in real occupational circumstances. However, pupils only get one chance of work experience in S4 and for many it is a negative experience. If they find after work experience that they do not like the occupation which they have had in mind for a few years, they may not get a chance to do work experience in another occupation.

Shanghai schools organise careers talks to introduce pupils to careers, while Edinburgh schools prefer careers visits. Careers talks can help pupils understand the reasons why some people are successful in certain occupations, and they can encourage pupils to think about these occupations. However, schools always invite successful people to talk about their careers, and these people tend to present a rather subjective view of their occupation rather than a general picture of their job. Careers visits in Edinburgh help pupils see occupations in action, but they do not necessarily show pupils how to make a success of an occupation or stimulate them to consider that occupation independently.

Shanghai schools use no-standardised psychological testing to help pupils understand themselves, whereas in Edinburgh no-standardised psychological testing is part of computer-assisted careers guidance. In Shanghai no-standardised psychological testing can help pupils develop their careers awareness to a certain extent. This is useful for those pupils who have no careers ideas, but the results should only be used as a guide. Computer-assisted careers guidance and information combines personal interests and abilities with occupational requirements, and can therefore help pupils gain a wider knowledge of jobs than no-standardised psychological testing can. But people's careers choices are influenced by many factors, such as personal values, family and society. Both people's personalities and job requirements are highly individual, so people and jobs cannot be categorised accurately. For this reason no-standardised psychological testing and computer-assisted careers guidance often provide unrealistic careers advice for pupils.

Schools in both Shanghai and Edinburgh offer careers counselling. Effective careers counselling ought to be structured, because careers providers need several interviews to understand pupils, analyse and diagnose their careers problems, provide suitable careers information, and follow-up. However,

the survey shows that guidance teachers in Shanghai do not have enough time to cover all the aspects involved in counselling, while careers officers in Edinburgh do not have enough time to see pupils. Pupils in both Shanghai and Edinburgh need more careers counselling.

Edinburgh schools have careers libraries and Shanghai schools have careers rooms. Both careers libraries and careers rooms need to be improved and well maintained. The careers materials need to be increased and kept up-to-date. Careers rooms in Shanghai are poorer than careers libraries in Edinburgh, which may reflect the lack of careers information available in Shanghai because there is no special careers information unit.

4. Other influences on pupils' careers choices

The career aims of pupils in both Shanghai and Edinburgh are affected by two informal routes: T.V., films and novels and the school curriculum.

T.V., films and novels often encourage pupils to fantasise about fictitious careers. The occupational information is often unrealistic and pupils should be aware of this.

A number of pupils in both Shanghai and Edinburgh consider careers based on their preferences and abilities at school. There is a close relationship between ability in a school subject and choice of occupation. However, this relationship is not simple, as many jobs are related to several subjects. School subject teachers should encourage pupils to see the relationship between their subject and the kind of jobs it might lead to.

Edinburgh pupils are keen to talk to working people when choosing a career. However, pupils should be wary of getting biased accounts of jobs from those who do them.

Careers providers should analyse the ways in which pupils gain careers information. If pupils are getting biased information, careers providers should supplement it to help pupils make realistic careers choices.

5. The relative helpfulness of each careers guidance method

Pupils in both Shanghai and Edinburgh rank careers activities, which help them learn both about themselves and about occupational requirements, as very helpful. Shanghai pupils like careers interest groups and careers counselling; Edinburgh pupils like work experience, careers counselling and the course "Life and Work". This would suggest that pupils prefer activities in which they can attempt to match their personal characteristics with different occupations.

Shanghai pupils regard careers days as the greatest source of help while Edinburgh pupils do not find them very helpful (ranking 1 for Shanghai pupils and 8 for Edinburgh pupils). This may be because for Shanghai pupils careers days are the main way to gather careers information. Without careers information, pupils cannot make careers choices. However, Edinburgh pupils can acquire careers information in several ways, not just from careers days.

Careers counselling is one of the main ways to help pupils solve their own careers problems. Pupils in both Shanghai and Edinburgh require more careers counselling. Some pupils of low academic achievement in Shanghai complained that they had not received enough attention from guidance teachers because of their limited careers choices. Some pupils of low academic achievement in Edinburgh did not want careers counselling because they thought they had no careers choice. Careers counsellors in both Shanghai and Edinburgh are overloaded with work and the majority of

pupils only have one careers interview. Pupils' careers choice is a process, and one interview cannot really solve their careers problems. Careers officers/careers teachers in Edinburgh use individual counselling, while guidance teachers in Shanghai employ not only individual counselling, but also group and peer counselling. In Edinburgh schools encourage pupils to think individually. In Shanghai schools always encourage pupils to discuss problems and help each other. This school ideology influences the methods of school careers counselling.

No-standardised psychological testing is regarded as the least helpful method by both Shanghai and Edinburgh pupils. This may be because of its limited function. No-standardised psychological testing can help pupils get to know themselves, but matching test results with job suggestions is often unrealistic.

6. Occupations considered by the pupils

The range of careers considered by Shanghai pupils covers 31 occupations, while Edinburgh pupils considered 45. The number of occupations in developing countries tends to be greater than in developed countries, because there is less mechanisation in developing countries. China should therefore have more occupations to offer than Scotland, and the Shanghai pupils might be expected to name more occupations than the Edinburgh pupils. The figures in the survey show the opposite result, which perhaps points to the poor standard of careers information in Shanghai. In fact, the narrow range of occupations considered by pupils in both cities would suggest that schools might pay more attention to the provision of careers information.

The range of occupations is considered by pupils at an early stage in both Edinburgh and Shanghai. There is only a little change in the range of occupational considerations after the first year of secondary school. This suggests that school careers guidance should provide wide occupational information from the first year of secondary school onward.

7. Sex discrimination in enrolment and recruitment

Sex discrimination is a serious problem in Shanghai, where females do not have equal opportunities with males in situations of enrolment, recruitment and early retirement. Many pupils, particularly females, feel strongly about this, saying that it discourages them from considering certain careers.

8. Discussion

In October 1994 the Department of Education in Lothian Region issued a report - *Careers Education and Guidance: A Statement of Policy and Practice for Secondary Stages of Education* - as a guideline for schools to implement careers guidance (Lothian Region Council, Department of Education, 1994). Since April 1995 the careers service has been privatised in Scotland. The Careers Service in Lothian Region was transferred to Careers Development, Edinburgh and Lothian Headquarters, which is funded by the Education Department of the Scottish Office. However, despite this change, the staff and aims of the careers service remain the same. The 1994 report is still a guideline for school careers guidance. This report recommends that schools should have a coordinated and structured careers guidance programme from S1 to S6. But this report does not give reasons why careers guidance should start in S1. However, this survey has shown that the majority of

pupils in S1 have considered their career aims, which would support the recommendation of the 1994 report. The report requires school guidance teachers, teaching staff, careers officers, employers and parents to work together in careers guidance. However, this survey has found that it is very difficult to fulfil this aim without school support. Both careers officers and guidance teachers need much more time to implement careers guidance. The report calls for schools to develop careers guidance through extended activities, such as work experience, careers libraries, careers days. This survey has revealed that such activities need to be improved.

At present secondary schools in large cities in China are required to develop careers guidance through educational activities, and to learn from experiences of careers guidance in Shanghai.[1] However, this survey has found that each careers guidance method in Shanghai has some shortcomings and needs to be improved.

In order to make school careers guidance practice in both Shanghai and Edinburgh more effective the following recommendations, based on this study, can be made.

In Shanghai a few units should be set up as soon as possible. The first should be a careers guidance centre, which would help guidance teachers develop careers guidance programmes. The second should be a careers information unit to provide information for guidance teachers. Without a careers information unit, careers guidance cannot be implemented effectively. In addition, Shanghai schools should arrange more time for guidance teachers to focus on careers guidance and guarantee that this work is not interrupted by other school work. Edinburgh schools should give careers officers more chance to talk to and communicate with pupils, guidance teachers and parents.

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[1] Personal correspondence with Professor Jin Yiming by letter on 22 October 1995.

Careers days in both Shanghai and Edinburgh should involve not only pupils, but also parents, guidance teachers and careers officers. Guidance teachers and careers officers should use careers days as an opportunity to contact representatives and collect careers materials for pupils. They should also organise meetings to discuss and analyse the information that pupils have accumulated from careers days in order to give them the fullest possible picture of a career.

It might be useful to combine careers interest groups and competitions with work experience in order to overcome the disadvantages of each method. For younger pupils schools could perhaps organise careers interest groups and competitions to help them explore their careers choices. The content of school interest groups and competitions should be based on the local labour market and on pupils' possible careers choices. Pupils should have the freedom to choose and change their careers interest groups and competitions. After that, schools could provide work experience to encourage pupils to see people at work in a given occupation. This might reduce the number of negative experiences had by pupils on work experience.

It might be more effective to combine careers talks with careers visits in order to avoid the shortcomings of each. Through careers visits, pupils get the chance to see a job in action. However, this is not enough. If visits were supplemented by careers talks by successful people, pupils would learn how people are successful within different careers, and they might be inspired to think more positively about certain occupations.

Careers libraries and careers rooms need to be improved. Careers providers should take the chance to collect careers information on occasions such as careers days. School librarians should collect careers materials from newspapers and magazines. Pupils' reports on careers talks and careers visits

should also be made available to younger pupils. Careers providers should encourage pupils to read careers materials and watch careers video tapes in careers libraries and careers rooms. Once pupils have had a chance to use a careers library or careers room, they ought to have a meeting with careers providers to discuss and analyse the information they have accumulated.

Greater emphasis needs to be placed on careers counselling in both Shanghai and Edinburgh. In Shanghai, schools should organise counselling rooms and guidance teachers should be available at certain times for consultation with pupils. In Edinburgh careers officers might work in schools more than one day a week in order to meet pupils' careers needs. Each pupil needs several interviews to discuss his or her career.

Computer-assisted careers guidance is more helpful in developing pupils' careers awareness than no-standardised psychological testing. However, neither no-standardised psychological testing nor computer-assisted careers guidance can replace other careers guidance methods.

Each careers guidance method goes some way to helping pupils to get to know themselves, to learn about occupations, and to match personality with occupations. In order to achieve these aims more successfully, it might be useful to set up a careers guidance course. This course might include a systematic series of lectures, activities, tests and counselling.

The range of careers considered by pupils in both Shanghai and Edinburgh is very narrow, which suggests that pupils lack careers information. It would seem essential that school careers guidance concentrates on the provision of more and better careers information.

The majority of pupils and all 24 guidance teachers in the survey in Shanghai complain of sex discrimination in enrolment and recruitment. Females have not the same right to compete with males in education and

employment. This is not the case in Edinburgh since the Sex Discrimination Act of 1975. Under the Act, it is illegal to discriminate on grounds of sex in the fields of education, employment and training. The law of equal opportunity helps to protect females in enrolment and recruitment. It is well known that females have every capability of competing with males in the fields of education and work. The main purpose of careers guidance is to tap human resources. If sex discrimination continues in China, there will be a huge waste of human resources and careers guidance will not achieve its aim.

CHAPTER 10

DISCUSSION

Chapter 10: Discussion

The purpose of this study was to examine careers guidance through comparative studies in Shanghai and Edinburgh. Chapters 4 to 9 have described, analysed and compared pupils' experience and perception of careers choices and careers guidance practice. This chapter will attempt to construct a comprehensive picture of how pupils' careers expectations are affected by different factors, and then go on to examine the relationship between careers guidance models and practice, and between careers guidance policies and their implementation. The implications of this study will also be considered, and some suggestions for further study will be made.

Before making conclusions it is necessary to review the limitations of this study in order to understand within what range the results can be used. The selected seven schools in this survey were all in the centres of two large cities. The sample may not reflect the careers awareness and careers expectations of young people in other cities and rural areas. For example, Shanghai has become an international business city, which is why many pupils pursue the jobs of businessman/businesswoman or clerk in joint-venture enterprises. This might not be the case in other, more industrial cities in China. The survey showed that none of the Shanghai pupils wanted to be a construction worker or childminder. However, in rural China the job of construction worker or childminder might still be considered by many young people. Recently many young people from rural areas have gone to Shanghai to look for jobs as childminders, construction workers and cleaners, but most of them have failed because they did not know how to get these jobs. Similarly, none of the Edinburgh pupils suggested becoming farmers or fishermen, whereas young people in rural areas in Great Britain might well choose these occupations. So the following

conclusions, based on this survey, may not necessarily be applicable to schools in other areas.

1. Factors determining pupils' careers choices

This study demonstrates that pupils' careers development is influenced by their personal psychological development (interests and abilities), by the culture of their school, by their school academic achievements, by their gender, by their family, by their peers, by the prevailing political, economic, and cultural climate, by employment policies, by public opinion and by the labour market. Ten key issues have emerged from this comparative research.

(1) The study has shown that pupils' interests and abilities are important criteria when choosing a career. However, because pupils' interests and abilities change as they grow up, and as pupils are constantly acquiring new occupational information, it is very difficult for them to have a clear idea of how their interests and abilities could be accommodated in an occupational situation. Therefore, pupils need experience in an occupational situation in order to gain a better understanding of themselves. Moreover, when facing specific careers choices, other factors such as job awards, public opinion, job opportunity, family and society may play a determining role in pupils' careers choices.

(2) This study indicates that young people's careers choices start at an early age, not just before leaving school. At the age of 13 the majority of pupils already have career aims although these aims may change later. The range of pupils' occupational choices is very narrow. More than 50 per cent of pupils' occupational ambitions fall within 10 jobs, and those have been shaped by the age of 13. However, school careers guidance starts for pupils

only at the age of 15 in Shanghai and at the age of 14 in Edinburgh. Because a pupil's range of occupational considerations has been formed by the age of 13, school careers guidance might be better to start before S1 in Edinburgh and before Junior 1 in Shanghai.

(4) This survey shows that Edinburgh pupils' social and economic class has a profound influence on their careers expectations. However, it seems that pupils' family backgrounds only influence their higher educational expectations and careers level choices indirectly through affecting their academic achievements, and do not influence their job type expectations. In contrast, in this special time of economic reforms in Shanghai, family socio-economic class has less influence on a child's higher educational expectations, and a father's job level does not seem to affect his child's job level expectations.

(5) Pupils' careers expectations are influenced by local political, economic, education and employment policies.

From 1986 to 1994 in Shanghai there has been a big shift in economic, education and employment policies. These changes influence young people's careers expectations. This can be shown by comparing the 1986 survey (see introduction) and the analysis of this 1994 survey.

First, the careers values for Shanghai pupils in 1994 differed significantly from those of pupils in 1986. Young people of 1986 stated that they regarded both their personal characteristics and the contribution they would make to society as important when choosing a career. They wished to develop their personal interests and talents as a means of making a contribution to their country, thus combining their talents and interests with the needs of society. However, by 1994 pupils thought that their own personalities and job salary were the most important factors, and no longer felt that the contribution of a job to society was important when choosing a career. These changes of

attitude amongst pupils reflect changes in the economic and employment policies of China, especially in Shanghai.

Secondly, as mentioned in the introduction, many pupils in 1986 wanted to be scientists and teachers, while many pupils in 1994 wished to be businessmen/businesswomen. There are historical reasons for this situation. Pupils' occupational choices in the 1980s reflected the distinguishing feature of the decade: namely, the entrance of China into a new stage of development focusing on modernisation. In view of the need for economic development as well as the need to create order out of chaos, there was a new emphasis on the value of scientific knowledge and the important role of intellectuals.

However, by 1994 pupils were no longer interested in becoming teachers and scientists. They wanted to pursue high salary jobs in business, which is a reflection of the economy and the labour market in the early 1990s.

Third, the attitude among pupils towards self-employment was very negative both in 1986 and 1994. This again was a reflection of cultural and social history. Although the private sector had made a great contribution to solving the problem of unemployment, it was seen as a sector lacking job security and prestige in the eyes of most Chinese young people. As past experience had shown, the private sector was extremely vulnerable to change in the political wind (Young, 1985). Criticism and rejection of private ownership after 1949 had had a negative effect on attitudes to self-employment. As a result, even the possibility of high income from self-employment has not attracted pupils greatly until now.

The political and employment situation of a country influences the type of careers guidance given. In Shanghai, from 1909 to 1949, vocational guidance was popular because of the problem of job-seeking and unemployment.

However, from 1949 to 1977, careers guidance was abandoned because people had no freedom to choose their own jobs in the prevailing political climate.

In Edinburgh people have been free to choose their own jobs for a long time. At times when the economy and the labour market have been unstable they have needed special careers help. The work of careers guidance needs to be improved to keep pace with the changing economy and labour market.

(6) Pupils in Shanghai and Edinburgh thought that parents, not careers guidance providers, were the most helpful source when choosing a career. This is because parents have a close relationship with their children, whereas careers guidance providers are not often available. Pupils in Shanghai also regarded friends as very important because of the close contact and confidentiality they share with them. In Shanghai young people regard their close friends as brothers and sisters because each is an only child at home. They therefore want to discuss their careers considerations with their friends. However, parents and friends are not careers experts, and cannot always give proper careers advice. Careers guidance providers should try to provide careers guidance for both pupils and parents.

(7) Pupils' academic achievements in both Shanghai and Edinburgh are the dominating factors in their higher education and job level expectations.

This may be explained by the fact that pupils in both Shanghai and Edinburgh have to take standard examinations. The results of these examinations are the key factor in deciding whether pupils have a chance to enter higher education and better jobs.

This study also revealed that gender still plays an important role amongst pupils in Shanghai and Edinburgh when choosing a job type. Girls tend to choose "social" jobs while boys choose "realistic" (Holland's terms) type jobs. This may suggest that pupils in Shanghai and Edinburgh still consider

certain jobs as predominantly male and female: boys want to work in the areas traditionally associated with men, while girls want to work in jobs that are generally regarded as women's jobs. Traditional roles may also be a result of previous experience of playing male or female roles in play, activities and housework.

(8) School ideological education in China tends to have a stronger influence on younger pupils' career aims than on those of older pupils. This is because young pupils tend to accept what they are told by their teachers whereas older pupils have learned to think more independently. Ideological education at school encourages pupils to consider social needs and the contribution of a job to society, rather than personal needs, when choosing a career. This type of education was relevant under the old employment system whereby the State found people jobs. However, economic and employment reforms have given pupils more and more freedom to choose their own careers. So existing school ideological education cannot meet the reform of economic and employment policies. The content of ideological education should be changed to suit the new situation in China.

(9) In Shanghai, public opinion is becoming a dominating factor for pupils about to leave school. This can be explained by the fact that pupils do not have enough accurate careers information with the rapid appearance of new occupations in Shanghai. Pupils therefore follow public opinion and sometimes choose their careers blindly.

(10) The survey shows that many pupils change their careers expectations as they grow to understand themselves better and as they accumulate occupational information through school careers intervention. It has been confirmed that careers guidance activities have some influence on pupils' careers expectations.

Following on these ten issues, a comprehensive picture of the development of pupils' careers expectations can be constructed based on the survey in these seven secondary schools. (1) Pupils' careers choices are affected by local politics, economic and employment policies, the labour market, family, school education and public opinion; (2) at present, pupils' higher education and job level expectations are mainly determined by their school academic achievements, although socio-economic class has a strong influence on the careers choices of Edinburgh pupils, and mothers' job level influences Shanghai pupils' job level expectations; (3) gender affects pupils' job type expectations; (4) young people begin to think about their careers at an early stage, and so school careers intervention could give them a more realistic approach to their careers; (5) choosing a career is a changing process as young people learn to understand themselves better and accumulate occupational information. But this development is highly individual and has no distinct stages.

Therefore, none of the existing careers guidance models, including the matching model, the personality type model, the developmental model, the opportunity structure model and the combination model, sufficiently encompasses all these important factors. Although some aspects of each of the careers guidance models appear to be relevant to the situation in Shanghai and Edinburgh, no one single model adequately covers careers guidance in either country.

Why each careers guidance model emphasises one aspect of the subject and neglects other important factors may relate to the advocates' own field of research. The advocators of the matching model were dominated by clinical psychologists, such as Williamson, who focused on matching personal characteristics with job requirements through psychological counselling. The proponents of the personality type model were mainly psychotypologists, such as Holland, who tried to match psychological types

with occupational types through psychological tests. Those behind the developmental model were mostly developmental psychologists, such as Super, concerned with the development of career aims and choices. The opportunity structure model was advocated by sociologists, such as Roberts, who studied social structure and job opportunity. The combination model was the work of educationists, such as Jin Yiming, who hoped to use educational activities to help people look for suitable careers. However, it has been found from the survey that young people's careers choices are much more complex than any one of these models would suggest. Therefore, in order to set up an effective careers guidance model in the 1990s it is necessary to have the co-operation of educationists, psychologists, sociologists, economists and careers guidance practitioners.

2. The relationship between careers guidance models and practice

Chapters 2, 4, 5 and 6 explore careers guidance models and Chapters 7, 8 and 9 examine careers guidance practice. It is necessary to study the relationship between careers guidance models and practice. The careers guidance providers were asked to say how far they agreed or disagreed with a list of statements about careers guidance models, based on their experience of school careers guidance. The results can be seen in Table 10.1, based on the questionnaire survey from 24 careers officers in Edinburgh and 12 guidance teachers from six schools in Shanghai.

Table 10.1. Careers guidance providers' opinions of careers guidance models

	Strongly agree or agree		Not sure		Strongly disagree or disagree	
	Shang*	Edin*	Shang	Edin	Shang	Edin
- Careers guidance is intended to match people's interests and abilities with job requirements.	75%	70.8%	0%	0%	25%	29.1%
-. Careers guidance should start in schools as early as possible.	83.3%	87.5 %	0%	0%	16.7 %	12.5 %
- Learning to choose a career is a process that takes a number of years.	83%	95.8 %	0%	4.2%	17%	0%
- Most school leavers have little choice about their careers.	0%	4.2 %	0%	4.2%	100 %	91.6 %

*Shang: Shanghai guidance teachers *Edin: Edinburgh careers officers

Table 10.1 shows that the many careers guidance providers in both Shanghai and Edinburgh accept some ideas from each of the matching model, the developmental model and the combination model. They regard careers guidance as a process to help pupils match their interests and abilities with job requirements. But a quarter of guidance teachers in Shanghai and about a third of careers officers in Edinburgh disagree with the matching model. This may be because these careers guidance providers believe that other factors, such as salary, work conditions family, and socio-economic class,

should also be considered in careers guidance. Most of the careers guidance providers disagree that most school leavers have little choice of career, as emphasised by the opportunity structure model.

However, careers guidance practice does not really follow a single careers guidance model; rather, it adapts some ideas from different models. Careers guidance practice is mainly based on pupils' needs in both Shanghai and Edinburgh. In Edinburgh schools careers guidance can be classified into three stages: subject choice guidance in S2, careers choice preparation in S3 and careers decision guidance in S4. Careers guidance starts in S2 because subject choices for pupils take place in S2. The task of careers guidance for pupils in S3 is to help them understand job groups and personal interests and abilities in order to prepare them for making careers choices in S4. The task of careers guidance in S4 is to help pupils make careers decisions, using methods such as careers days, work experience and careers counselling. In Shanghai careers guidance starts in Junior 2 and can be classified into two stages at junior secondary level: careers preparation guidance in Junior 2 and careers decision guidance in Junior 3 because 50 per cent of pupils are facing the choice of vocational and technical training. The task of careers guidance in Junior 2 is similar to that in Edinburgh schools in S3. The task of careers guidance for pupils in Junior 3 is to help pupils make careers decisions, mainly using the methods of careers days and careers counselling. At senior secondary school level careers guidance repeats the tasks of junior secondary level, but the content is different. At senior level, careers guidance aims to help pupils explore personal interests and abilities in high level occupations because pupils are more qualified than junior secondary school leavers.

Careers guidance practice does not follow the matching model which has six steps: analysis, synthesis, diagnosis, prognosis, counselling (treatment) and follow-up. In both Shanghai and Edinburgh, careers guidance practice

employs wider methods such as interest groups, careers days, work experience and counselling, which aim to create circumstances to let pupils manifest their characteristics in occupations.

Although Holland's two test inventories - the Vocational Preference Inventory and the Self-Directed Search - are adapted in careers guidance in Shanghai and Great Britain, these two tests are only used as a reference tool to help pupils get to know themselves. The content of careers guidance practice is much wider than a psychological test. Moreover, it is doubtful that people of the "realistic" type lack social ability, people of the conventional type lack artistic ability, and people of the investigative type lack enterprising ability. In modern society more and more jobs need multi-abilities, including social ability (such as communication) and "realistic" ability (such as computing), etc.

Nor does careers guidance practice fully follow the developmental model. Careers guidance programmes in both Shanghai and Edinburgh are not based on Super's careers psychological development stages: the fantasy stage (4 -10), the interest stage (11 -12), the capacity stage (13 -14), the tentative stage (15 -17), and the transition stage (18 -21). Moreover, Super's careers psychological development stages have not been confirmed by this survey. On the contrary, the reasons why pupils in both Shanghai and Edinburgh change their career aims are determined by many different factors and are highly individual.

The opportunity structure model evokes more attention among careers guidance providers to job opportunities in careers guidance in Edinburgh. School careers guidance emphasises careers counselling to help pupils make realistic careers decisions. However, careers guidance providers in both Shanghai and Edinburgh do not agree that young people have little careers choice, as emphasised by the opportunity structure. Shanghai pupils have a

certain freedom to choose their careers. Although there is a big problem of unemployment in Edinburgh, less able pupils still have freedom to choose their vocational training.

Careers guidance practice in Shanghai and Edinburgh aims to help young people prepare for and choose suitable and realistic careers over several years, as the combination model emphasises. According to the combination model careers guidance should be a long process of developing individual interests and abilities. However, careers guidance does not provide enough opportunities for pupils to express their interests and abilities because careers guidance providers are overworked.

The survey also shows that careers guidance providers have not followed single careers guidance model in their careers counselling. The majority of pupils in both Edinburgh and Shanghai only get one careers consultation of about half an hour. This goes against the model that careers counselling should be part of the process of helping pupils to understand themselves and collecting occupational information, before making a careers decision.

3. The relationship between careers guidance policies and their implementation

As described in Chapter 1, a series of government documents in both China and Scotland requires and guides schools to implement careers guidance. *The Manifesto of the Chinese Careers Guidance Association,* published in 1994, repeatedly emphasises that school staff should be involved in school careers guidance. All pupils, whatever their academic achievements, should be helped to make wise careers choices (Chinese Careers Guidance Association, 1994). The government document *Higher Still: Guidance arrangements,* published in Scotland in 1995, reaffirms that careers guidance

is cooperative work involving teaching staff, guidance staff, librarians and careers officers. Pupils should be adequately informed about available opportunities and have support in considering these opportunities. Pupils should be helped to develop the skills in coping with significant changes in their lives such as moving from school to college or to a paid job (*Guidance Consultation Document,* 1995).

However, it has been found from the survey that government advice on careers guidance in both Shanghai and Edinburgh has not been put into practice in schools because of certain hindrances.

First, in both Shanghai and Edinburgh guidance teachers and careers officers do not have enough time or opportunities to develop careers guidance. In Shanghai, guidance teachers are overloaded with their teaching tasks and pupils' work, such as class collective activities, morning physical exercises, study guidance, family visiting, etc. As one guidance teacher said:

> I think careers guidance is important for my school and I am very interested in it as well. But I have to teach Chinese writing two periods (45 minutes each period) a day, organise morning exercises, morning class meetings, class collective activities, maintain class discipline, and deal with all the pupils' problems. I have to work from 7 in the morning to 6 at night in my school, read pupils' papers in the evenings and visit pupils' parents at weekends. My principal asks me to do a lot of extra work, such as adolescent education, environmental protection education, educational research, careers guidance, etc. In fact, we do not have enough time to start new work.[1]

One secondary school principal said:

> Careers guidance can only be treated as a little oil in a bowl of soup, a little but superficial, because the Educational Bureau only

[1] Personal interview with a guidance teacher at a Junior and Senior Secondary School in Shanghai, on 6 April 1994.

checks whether we have implemented careers guidance and does not evaluate it specifically."[2]

In Edinburgh, according to government documents, careers officers, guidance teachers and employers should work together to provide careers guidance for secondary school pupils. However, according to the survey, careers officers do not have enough support from schools to deliver careers guidance. Guidance teachers have not been sufficiently trained in the field of careers guidance and consider careers guidance as the duty of the careers officer. Careers officers do not have enough time to visit schools; so it is impossible for pupils to receive effective careers guidance.

In order to put into practice the advice given in government documents, there are several points which need to be considered by policy-makers. First, careers guidance is co-operative work, which requires qualified careers guidance providers with enough time to implement careers guidance in schools. Second, the government should ensure that careers guidance providers get the necessary support from schools and employers. Third, careers guidance should be taken into account when evaluating the quality of a school.

4. The Implications of this Study

(1) It has been found from Chapters 2, 4, 5, and 6 that no single existing careers guidance model appears to be relevant to the situation in either Shanghai or Edinburgh. One reason for this may be that each model focuses on the particular aspects of careers guidance, to the detriment of others, whereas in reality young people's careers choices are influenced by society, school, family and personal values. Another reason may be that pupils'

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[2] Personal interview with a principal at a Junior and Senior Secondary School in Shanghai, on 6 April 1994.

careers choices in each nation are a function of the prevailing political, economic and education systems, employment policies and labour markets. As these factors change, so also do young people's careers choices and needs. For this reason, a survey of careers needs at any one time cannot be the sole basis of a careers guidance programme at a later stage. If a careers guidance model cannot match the flexibility of social factors, it will not meet young people's careers needs.

(2) If the economic and education systems of China and Britain were more alike, young people's careers choices would have more similarities. However, similarities between the two countries are growing. With the development of the market economy in Shanghai, young people in the 1990s regard personal interests, ability and salary as the most important values when choosing a career, as do pupils in Edinburgh. Because pupils in both Shanghai and Edinburgh have to take standard examinations which decide whether they can enter higher education and higher level jobs, their academic achievements become the dominating factor in their educational and job level expectations.

(3) It has been found from Chapters 7, 8, and 9 that different countries employ different careers guidance methods, but no single method is perfect. However, foreign careers guidance methods can be adapted to suit other countries and can often be used to improve another country's careers guidance practice. This is because, despite the differences between individual careers guidance models and their use in different countries, the underlying tenets of careers guidance - helping people to obtain broad and up-to-date careers information, helping people to understand themselves better and to make wise and realistic careers decisions - are similar throughout the world at present.

Schools in Shanghai and Edinburgh mainly use careers guidance activities to help pupils match their characteristics with occupations. There is no systematic careers guidance curriculum to help pupils to learn how to understand themselves, to analyse careers information and to make careers decisions by themselves. However, even this type of guidance may no longer be in keeping with the economic change and job mobility of the 1990s if it is restricted to the period of schooling.

(4) The changing economic, education and employment policies and the fluctuating labour market in the 1990s are having the effect of making people want guidance for life. The economic boom in Shanghai is creating many new jobs, such as counsellor, public relations officer, software designer and advertisement designer, and causing a number of traditional occupations, such as hand-weaving, cinema ticket collecting and much physical labour, to disappear. Technology is creating an increasing number of new jobs, while traditional manual jobs in factories are diminishing. With the use of advanced technology, workers have to keep up to date with new skills. It was officially estimated that there was a workforce redundancy of up to 15 per cent in state enterprises in the late 1980s. Of the surplus workforce 63 per cent was technically unqualified (Li and Bray, 1992). At present all new jobs in Shanghai are offered as contracts rather than as permanent jobs. Long-term employment for these new jobs no longer exists. This is also causing greater job mobility. Young people no longer commit themselves to one career, but can expect to have several occupations throughout their lives. For example, if a large engineering company closes down, some of the engineers may start up their own businesses and become managers; a mathematician may abandon theoretical research to become a transport engineer because theoretical research does not generate money in a market economy; and many teachers of politics are retraining as

counsellors or tour guides because of the decrease in political education in schools in China.

In Edinburgh, the economic decline has resulted in a more competitive attitude in the commercial and business world. Advanced technology has caused a reduction in the workforce in many businesses, thus increasing competition for the remaining jobs. Redundancy has also become a problem, making many people change their careers. As in Shanghai, the majority of new jobs in Edinburgh are contract, even part-time, jobs, which leads to greater job mobility.

Under the present employment situation, people need to be guided not just for one career but to cope with life in general and a changing career. Careers guidance must follow this trend, and its future aims should include not only helping people to find a suitable job when leaving formal education, but preparing them to cope with a life of change and mobility.

One important conclusion which may be drawn from this study is that young people's careers expectations can be seen to reflect the local political, economic and education systems, as well as the local social structure and labour markets, in addition to local culture and traditions. In view of this heterogeneity, it is impossible to develop a general careers guidance model that is universally applicable. For example, the fact that in Shanghai parents' job levels do not significantly influence their children's higher education and job level expectations may be explained by the economic situation in Shanghai and the "one family one child policy" in China. Gender influences pupils' careers choices, but the choice of available jobs depends on the local labour market.

Pupils' careers expectations may also differ from one area to another. The author went back to Wujin, a medium-sized, prosperous city in China, and visited his former secondary school. Some guidance teachers there felt that

pupils' family incomes decided certain pupils' careers choices. Some bright pupils' parents worked for state enterprises and had very low family incomes, about 500 yuan (£ 38) a month for three people. Although these pupils had the qualifications to enter university, their parents could not give them the financial support needed for tuition fees and living expenses. Some bright pupils therefore chose to enter vocational and technical schools after graduating from junior secondary school, which meant that after three years they would be likely to have a job and a salary. If they decided to go to university they would have to study for three years at senior secondary school and then four years at university.

One result that I do not report from my data is that pupils in Shanghai prefer to study and work in Shanghai than move to other areas. For example, pupils would rather not go to college at all than go to a college outside Shanghai. This may be because Shanghai is seen to be one of China's rich, modern cities and therefore young people do not want to leave it sensing that economic opportunities are greater. Moreover, the majority of pupils are the only children at home and parents might not want their only child to leave Shanghai given the centrality of family life in Chinese culture. These illustrations are meant to reinforce the point made earlier that geographical factors influence young people's careers expectations.

Despite the difficulties expressed above in formulating a general model we can explore the possible value of a guidance model that would be pragmatic, rational and relevant to the locality. What would be the dimensions of such an approach? What aspects, if any, of those models that have been criticised in this study would such a guidance model share? Such a model might consider six dimensions: social context; school context; classroom context; the individual himself/herself; family context; and other cultural aspects that influence careers choice. These dimensions are based on the points made above and reinforced by the data, namely, that local contexts or

situations are of paramount importance in determining pupils' careers expectations.

Social context differs from one country to another, from urban to rural areas, form one city to another, from one district to another. Social context may include politics, the economy, employment, labour markets, education, traditions and culture.

Different countries have their own political, economic and education policies, and their own cultures, which influence young people's careers expectations. For example, employers and employees in Britain enjoy the freedom to choose each other, but in China most people are limited in their careers choices by the resident certificate policy which restricts them to the area in which they live.

Young people in urban areas have different careers aspirations from those in rural areas. For example, in China people from rural areas have little chance of getting white collar jobs in cities. Most of them have to resign themselves to working in the countryside.

Young people's aspirations vary from city to city. Many young people in Shanghai wanted to be businessmen or businesswomen because of the high level of international business in the city. But young people in smaller Chinese cities might not be able to aspire to pursue these careers because of limited job opportunities in business.

Young people's careers expectations may also differ from one district to another. For example, in Edinburgh young people from areas of economic deprivation had lower-level career aims than those who lived in better-off areas. A proportion of pupils in deprived areas seemed not even to want jobs because their parents and neighbours were unemployed and a culture of non-work seemed to prevail. In China, in some small industrial towns,

many young people want to work in manufacturing or industry because such jobs are plentiful.

The second dimension of such a model might be school context, including school type, such as private or state, key-point or non-key-point, school careers guidance activities and careers guidance providers' advice. In Britain private schools have a much higher academic standard than many state schools. State schools located in well-off areas have a higher academic standard than those located in deprived areas. In China key-point schools have a much higher academic standard than non-key-point schools. The arrangement of school careers guidance differs from one school to another. Some schools are more active than others in developing careers guidance. Schools with good careers guidance offer better opportunities for pupils to consider their future careers wisely and realistically. From this study, it was found that each school careers guidance activity would help some pupils to think more realistically about their careers choices. From Howieson's work in Scotland (Howieson, 1993), for instance, it was found that work experience had an effect on pupils' attitudes to manufacturing. Different schools offer pupils different careers guidance activities, which affect pupils' careers choices. If one school invites a child psychologist to speak to the pupils, many will be attracted to this career; if another arranges for its pupils to visit an architect's practice, then some pupils may consider studying architecture.

The third dimension of the model might be classroom context, including classmates and class careers guidance activities. From this study, it was found that several pupils in Shanghai wanted to be politicians because of the influence of their classmates. A few pupils in Edinburgh ceased wanting to be singers when they found that they could not compete with more musical classmates. Competitions can often affect a pupil's career aim depending on how he or she does in a competition.

The fourth dimension of the model might concentrate on the individual himself/herself and consider age, gender, academic achievements, interests, abilities, values and personal experience. As pupils grow older their career aims tend to be more realistic. Some girls may want to work in jobs where most of the workers are female, whereas some boys may want to enter jobs where most of the workers are male. Pupils' academic achievements may be the most influential factor in their higher education and job level expectations because of the requirements of university entrance and job selection. Pupils would like to pursue careers which match their interests and abilities. An individual's personal values are also very important when making a careers choice. Some pupils want a job with a high salary, others want job security. Some pupils choose their careers because of personal experience. For example, a pupil may want to be a mathematician because he or she gets high marks in a maths exam.

The fifth dimension of the model might be family context, including family socio-economic class, parents' educational levels and parents' advice. From this study, it has been found that family factors influence some pupils' careers choices, but not others. For example, in Shanghai a father's education and job level seem to have little or no influence on his child's careers expectations, but this was not the case in Edinburgh. Parents' advice does tend to influence their children's careers considerations in both Shanghai and Edinburgh.

The sixth dimension of the model might cover other cultural aspects that influence careers choice, such as T.V., films, novels and public opinion. This study showed that T.V., films and novels affected younger pupils' careers aims and that public opinion influences many Shanghai pupils' careers expectations.

However, the extent to which each of these six dimensions influences pupils' careers expectations depends on the local situation and on pupils' careers needs in a particular place. It might be helpful for policy-makers to explore these six dimensions within one locality when setting up careers guidance programmes. It might also be useful for school careers providers to discuss these dimensions based on locality when planning their school careers guidance programmes. Further research in this field might well want to consider testing this pragmatic, rational and context-specific model.

5. The Need for Further Study

This study has found that none of the existing careers guidance models could be applied in Shanghai or Edinburgh, and none of them could be put into practice by careers guidance providers. There are two main reasons for this situation. One is that each careers guidance model emphasises one aspect of the subject and neglects other important factors. Another reason is that no single careers guidance model could match the changes in the economy, in the labour market, in the employment policy and in people's careers needs.

This study shows a comprehensive picture of the careers choices and needs of secondary school pupils, but the research is limited to seven secondary schools in Shanghai and Edinburgh. It is necessary to expand this study to schools in other areas. Surveying different group samples, such as primary school pupils, university students and employees, unemployed and retired people, would help us to understand the whole process of people's careers changes and the interaction of affecting factors.

One point highlighted by this study is the effect of the labour market and the employment situation on people's careers choices.

In the 1990s great changes have taken place in the labour market and employment situation in both Britain and China. In Britain there has been a rapid increase in unemployment, redundancy and self-employment, as well as in part-time, contract and agency workers. It is predicted that, by the year 2000, these employed in full-time tenured employment will be in the minority. The emerging labour market is made up of new, insecure employment (Hutton, 1995). In China, the labour market has developed with renewed speed. Lifetime employment is being replaced by fixed-term contracts for new recruits, university and school leavers are being recruited in the market rather than assigned by the state, and wages are becoming more flexible. Geographical and inter-enterprise mobility of labour is also increasing (World Bank Project, November 1995). Moreover, unemployment is becoming a serious problem in China. The rate of unemployment was 2.3 per cent in 1992 and had risen to 2.6 per cent by the end of 1993 (Zhou Zhenhua, 1995). One speaker at the International Conference on Unemployment and Counselling, organised by the International Association for Educational and Vocational Guidance in 1993, predicted that the average job contract might one day last no longer than 7 months and that many people would do 65 different jobs during their working life (Hall, K., 1994).

The new insecurity of employment must surely influence people's careers expectations and careers needs. Careers guidance should acknowledge the current massive uncertainties in the labour market and their influence on people's careers choices. Careers guidance should help people not only to choose jobs, but also to develop a tolerance for uncertainty, to make use of leisure time, to recognise occupational mobility, and to learn the skill of careers decision-making themselves. This huge area of the effect of the labour market and the employment situation on people's careers choices

would merit further study and might even form the basis for a guidance model for life.

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[1] Asterisk * indicates that the source is in Chinese only. Translation of title made by the present writer.

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ABBREVIATIONS

CCCCP	Central Committee of the Chinese Communist Party
CCGA	Chinese Careers Guidance Association
CCP	Chinese Communist Party
CES	Centre for Educational Sociology, Edinburgh University
CSYS	Certificate of Sixth Year Studies in Scotland
CVEA	Chinese Vocational Education Association
CCYL	Chinese Communist Youth League
ECNU	East China Normal University, Shanghai
IDRC	International Development Research Centre, Canada
JIIG-CAL	Jobs Ideas and Information Generator Computer Assisted Learning
LEEL	Lothian and Edinburgh Enterprise Limited
S4	The fourth year of secondary school in Scotland
S5	The fifth year of secondary school in Scotland
S6	The sixth year of secondary school in Scotland
SCOTBAC	Scottish Baccalaureate
SCOTCERT	Scottish Certificate
SCOTVEC	Scottish Vocational Education Council
SDS	Self-Directed Search
SEB	Scottish Examination Board
SEB	Shanghai Education Bureau
SECC	State Education Commission of China
SED	Scottish Education Department
TVEI	Technical and Vocational Education Initiative
CYP	Chinese Young Pioneer
YTS	Youth Training Scheme in Scotland

APPENDICES

APPENDIX 1: QUESTIONNAIRE ON CAREERS AWARENESS FOR SHANGHAI SECONDARY SCHOOL PUPILS*

INTRODUCTION

Dear respondent,

I am a Ph.D research student at the Education Department of Edinburgh University, carrying out research in the field of careers guidance. I would be grateful if your could help my research by completing the following questionnaire.

I would like to ask you some questions about your future plans, about the guidance you have received, and about your job and your future education & training. At the age of 16+, you have to consider various options for your future. You might have thought about whether you should go on to college or university, or accept vocational and technical education, which sort of occupations you would like to do in the future.

Please try to answer the questions as honestly as possible. All the information you give us will be kept in the strictest **confidence** and will only be seen by the researchers.

HOW TO ANSWER

For most of the questions there is a list of possible answers with a box beside each one. You only have to put a tick in the box: for example, ☑ .For some questions you have to put a number in or beside the box: for example, [3] or ☐3. If none of the answers exactly fits what you want to say, choose the answer that comes nearest. If you want, you can write comments beside the question, but please **always tick** the answer as well. If you don't know the answer to a question, please write DK (don't know). If a question does not apply to you, please write NA (not applicable).

For some questions you have to write your answer; please write clearly.

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* This questionnaire was originally in Chinese.

1. Sex: Male☐ Female☐

2. Age: _____Years_____Months

3. In which class are you presently?

Junior grade 2 ☐ Junior grade 3 ☐

Senior grade 1 ☐ Senior grade 2 ☐ Senior grade 3 ☐

4. Are your parents, step-parents or guardians now... tick one box from each

	mother	father
- in full-time paid employment	☐	☐
- in part-time paid employment	☐	☐
- unemployed and looking for work	☐	☐
- retired	☐	☐
- unable to work (e.g. disabled)	☐	☐
- dead	☐	☐
- no father or mother	☐	☐

5 Please tell me about your parents, step-parents or guardians' jobs. If they are not working at the moment, please tell me about the most recent job each has held.

	mother	father
In what type of business do they work (e.g. shop, school)?	----------	----------
	----------	----------
What is the name of the job (e.g. Primary school teacher, bank clerk, Joiner)? Please be specific.	----------	----------
	----------	----------

6. What is their employment status? Tick one box from each.

	mother	father
Manager	☐	☐
Foreman	☐	☐
Employee	☐	☐

7. What are their employment units? Tick one box from each.

	mother	father
State enterprise	☐	☐
Collective enterprise	☐	☐
Joint-venture enterprise	☐	☐
Private enterprise	☐	☐
Self-employed	☐	☐

8. What are your parents' incomes?

Father's income _____. Mother's income _____.

9. Your family's average income (capitation) last year?

_____ .

10. Your average house area (capitation)?

_____.

11. Your family form? Please tick one box.

-. Four generations living together ☐
-. Three generations living together ☐
-. Two generations living together ☐

12. Is your family a single parent family or two parent family?

Single parent family ☐ Two parent family ☐

13. What educational level have your parents got? Tick one box.

	mother	father
-. Primary school	☐	☐
-. Junior secondary school	☐	☐
-. Skilled-workers' school or vocational school	☐	☐
-. Senior secondary school	☐	☐
-. Specialised secondary school	☐	☐
-. University or college, but no degree	☐	☐
-. Degree or above	☐	☐

14. How many brothers and sisters do you have, if any? _____

14.1 How many elder brothers and sisters do you have? _____

15. Do you plan to go on higher education?

Yes No ☐ Don't know ☐

16. Please write down the marks of the exam results in Shanghai standard exams.

Subject	Marks	subject	Marks	Subject	Marks

17. Which system of the employment units would you like to enter?

State enterprise ☐ Collective enterprise ☐

Joint-venture enterprise ☐ Private enterprise ☐ Self-employed ☐

18. If you have a chance to choose your future education and place of study, which one would you like to enter? Ranking the most important one to least important one.

Keypoint university in Shanghai ☐
Non-keypoint university in Shanghai ☐
Keypoint university out of Shanghai ☐
Non-keypoint university out of Shanghai ☐
College (no degree) in Shanghai ☐
College (no degree) out of Shanghai ☐
Specialised secondary school in Shanghai ☐
Specialised secondary school out of Shanghai ☐
Skilled-workers school or vocational school in Shanghai ☐
Skilled-workers school or vocational school out of Shanghai ☐
Short-term vocational training in Shanghai ☐
Unemployed ☐

19. If you could choose to do any kind of work, what sorts of jobs would you like to do? Rank the following groupings of occupations from the *most preferred* occupation (1) to the *least preferred* one (17).

Group of occupations	**Ranking**
- Administrative and Clerical	☐
- Agriculture, Horticulture, Forestry and Fisheries	☐
- Art and Design	☐
- Engineering/ Technological	☐
- Scientific	☐
- Processing and Manufacture	☐
- Building	☐
- Hotel and Catering	☐
- Personal service and Retail	☐
- Health service	☐
- Transport and Wholesale	☐
- Community and Teacher	☐
- Sport and Leisure	☐
- Artistic	☐
- Military	☐
- Other (please fill in if you choice was not on the list)	
_____	☐

20. If you could choose to do any kind of work, what specific jobs would you like to do (e.g. model, musician, photographer)?

Choice_____

21. Thinking <u>realistically</u>, what sorts of specific jobs do you think you will end up doing? (e.g. primary school teacher, bank clerk, joiner)

Choice_____

22. What sorts of specific jobs do you think your parents would like you to do (e.g. solicitor, geologist, bus driver)?

Choice_____

23. Have you discussed with your guidance teacher about your future career? If yes, please answer question 23.1. If not, go direct to question 24.

23.1 What sort of specific job has your guidance teacher suggested you could do (e.g. telephone operator, tailor, dental technician)?

Choice_____

24. People have different reasons for choosing their careers. How important is each of the following factors for you in considering your careers choices. Please rank the factors from *the most important* (1) to the *least important* one (10).

Reasons	**Ranking**
- Allows use of my ability	☐
- Working conditions	☐
- Secure and stable employment	☐
- Chance to advance	☐
- Status/prestige	☐
- Job opportunity	☐
- Interest	☐
- Benefit to society	☐
- My qualifications	☐
- Salary	☐
- Other (please say what)_____	☐

25. Please rate how helpful the following were in helping you make careers choices.

Source/People/etc.	A lot of help	Some help	No help	Not applicable
- Guidance teacher	☐	☐	☐	☐
- Other teachers	☐	☐	☐	☐
- Father	☐	☐	☐	☐
- Mother	☐	☐	☐	☐
- Relatives	☐	☐	☐	☐
- Friends	☐	☐	☐	☐
- Working people you have met	☐	☐	☐	☐
- Interest group and competition	☐	☐	☐	☐
- Careers day	☐	☐	☐	☐
- Careers room	☐	☐	☐	☐
- Vocational interest test	☐	☐	☐	☐
- Vocational ability test	☐	☐	☐	☐
- Careers counselling	☐	☐	☐	☐
- Careers talk	☐	☐	☐	☐

26. Young people often change their careers plans. Please write down what your job ideas (e.g. Primary school teacher, Bank clerk, Joiner) were during your school life, for these years that apply to you.

-. In primary 6 I wanted to be a _____(the job' name).

The reason for choosing:

-. In Junior 1 I wanted to be a _____ (the job's name)

The reasons for choosing:

-. In Junior 2 I wanted to be a _____(the job' name).
The reason for choosing:

-. In Junior 3 I want/ed to be a _____ (the job's name)
The reasons for choosing:

-. In Senior 1 I want/ed to be a _____ (the job's name)
The reasons for choosing:

-. In Senior 2 I want/ed to be a _____ (the job's name)
The reasons for choosing:

-. In Senior 3 I want/ed to be a _____ (the job's name)
The reasons for choosing:

27. How important are the following sources of help in making your careers choices?

	Very important	Quite important	Not very important	Not important
- Help in obtaining more careers information	☐	☐	☐	☐
- Help in becoming more aware of my vocational interests and abilities	☐	☐	☐	☐
- Help in making wise educational and vocational decisions	☐	☐	☐	☐
- Others: (Please specify) _____ _____ _____	☐	☐	☐	☐

28. Do you think that sex discrimination exists in enrolment and recruitment at present?

Yes☐ No☐ Don't know☐

28.1. If your answer is "yes", please give your reasons.

29. Please talk about your needs for school careers guidance.

30. In the following space, please add any other comments/suggestions about your experience of careers guidance (such as careers interest groups, competitions, careers talks, careers days, careers rooms, psychological tests and careers counselling, etc.).

Thanks for your help.

Zhang Weiyuan
Department of Education
University of Edinburgh
10 Buccleuch Place
Edinburgh EH8 9JT

上海市中学生职业意识和职业发展的问卷调查

统一指导语：

亲爱的教师，你好！

我叫张伟远，是英国爱丁堡大学教育系的博士研究生，专门从事中学生的职业指导研究。

学生的职业选择受到多方面因素的影响，包括社会、学校和家庭等等，我想了解根据你个人的经历和体会，你在这方面的观点和看法。

填写注意事项：

1、填写方法：

(1)在几个答案中选择一个最符合你的情况的答案，在此答案后的方格内打个“√”，如：☑

(2)问答。

(3)填写次序，如：3或□3。

(4)如果某个问题不符合你的情况，以致无法回答，请写上“不符合”。

(5)如果可选择的答案中没有一个完全符合你的真实情况，请选择一个最接近你的真实情况的答案。

2、问卷右侧（竖线外）的数字及方格是供计算机使用的，不必填写。

3、问卷中每一个题目，除“不符合”外，尽可能全部填写，请勿遗漏。

4、问卷中如有不明白之处，请举手询问。

谢谢你的合作。

1994年4月1日

问卷表 学校_____ 1□2□

4□

1. 性别: 男 □; 女 □; 4□

2. 实足年龄: _____岁_____月. 5□7□

3. 年级: 初二 □; 初三 □; 高一 □; 高二 □; 高三 □. 8□

4. 你父母的工作情况: 母亲 父亲 9□

※全日制工作 □ □ 10□

※非全日制工作 □ □

※失业或寻找工作 □ □

※退休 □ □

※无能力工作(如残疾) □ □

※死亡 □ □

※无父亲或母亲 □ □

5. 你父母的职业: 母亲 父亲

※工作单位(如商店, 学校) _____ _____ 12□

_____ _____ 13□

※职业(如教师, 车工, 裁缝) _____ _____ 14□

_____ _____ 15□

6. 你父母的职位: 母亲 父亲

※经理 □ □

※领班 □ □

※雇员 □ □

7. 你父母的雇佣单位是属于哪一类企事业? 母亲 父亲

※全民所有制 □ □ 16□

※集体所有制 □ □ 17□

※合资企业 □ □

※私营企业 □ □

※个体户 □ □

8. 你父母的每月收入?

父亲_____ 母亲_____ 18□19□

9. 你家去年的每月每人平均收入?_____ 21□

10. 你家平均住房面积?_____ 22□

11. 你的家庭居住形式:

四代同堂 □ 23□

三代同堂 □

二代同堂 ☒

12. 你的家庭形式?

有父亲和母亲 ☒ 24□

有父亲但没有母亲 □

有母亲但没有父亲 □

没有父亲也没有母亲 □

13. 你父母的文化程度:

	母亲	父亲	
			25□
小学	□	□	26□
初中	□	□	
技工学校或职业学校	□	□	
高中	□	□	
中专	□	□	
大专或大学,但没有学位.	□	□	
大学(有学位)以上	□	□	

14. 你有几个亲哥哥和亲姐姐?_____ 27□

15. 你有几个亲兄弟姐妹?_____ 28□

16. 你计划进高等学校吗?

是 ☒; 不 □; 不知道 □. 29□

17. 你的去年期末考试成绩?

课程	得分	课程	得分	
(1)		(5)		31□ 35□
(2)		(6)		32□ 36□
(3)		(7)		33□ 37□
(4)		(8)		34□ 38□

18. 你愿意到哪种单位工作?(只选一种)

全民所有制 □; 集体所有制 □; 合资企业 □; 39□

私营企业 □; 个体户 □.

19. 你愿意到哪类学校和地方去学习和工作(愿意的程度依1, 2, 3, … 12排列, 最愿意的为1, 请勿重复数字).

※上海的重点大学	□;	41□
※上海的普通大学	□;	42□
※外地的重点大学	□;	43□
※外地的普通大学	□;	44□
※上海的大专	□;	45□
※外地的大专	□;	46□
※上海的中专	□;	47□
※外地的中专	□;	48□
※上海的技工学校和职业学校	□;	49□
※外地的技工学校和职业学校	□;	50□
※上海的短期职业训练班	□;	51□
※待业	□;	52□

20. 你愿意选择哪类职业(从愿意的程度1, 2, 3…… 15依次排列, 请勿重复数字).

※办公室职员	□;	53□
※农业, 林, 渔, 园艺业	□;	54□
※艺术设计	□;	55□
※工程/技术	□;	56□
※科学	□;	57□
※加工业和制造业	□;	58□
※建筑工	□;	59□
※旅馆服务或餐厅服务	□;	61□
※零售业或其他个人服务业	□;	62□
※卫生健康	□;	63□
※交通	□;	64□
※教师和社会服务	□;	65□
※军队	□;	66□
※运动和闲暇	□;	67□
※艺术	□;	68□

你理想的职业是什么?_____ 69□70□

你从现实考虑，你将从事什么职业?_____ 71□72□

你父母建议你从事什么职业?_____ 73□74□

你的班主任建议你从事什么职业?_____ 75□76□

你在进行职业考虑时，认为哪些因素特别重要?(按重要的程度排列填1，2，3，……10，1为最重要的职业因素).

※发挥自己的能力 □; 77□

※工作条件 □; 78□

※雇佣的稳定性 □; 79□

※晋升的机会 □; 80□

※职业的社会地位 □; 81□

※工作机会 □; 82□

※符合自己的兴趣 □; 83□

※对社会的贡献 □; 84□

※自己的学业成绩 □; 85□

※工资和奖金 □; 86□

下面列举一系列与你职业选择有关的活动.人和事，根据你的真实情况来选择答案.

	很有帮助	有些帮助	没有帮助	不符合	
※班主任	□	□	□	□	87□
※职业教师	□	□	□	□	88□
※其他教师	□	□	□	□	89□
※父　亲	□	□	□	□	91□
※母　亲	□	□	□	□	92□
※哥哥姐姐	□	□	□	□	93□
※其他亲戚	□	□	□	□	94□
※朋　友	□	□	□	□	95□
※电视，录相，广播和报纸	□	□	□	□	96□
※与工作人员交谈	□	□	□	□	97□
※学校兴趣小组	□	□	□	□	98□

※职业咨询日	□	□	□	□	99□
※计算机辅助职业指导	□	□	□	□	101□
※职业图书馆	□	□	□	□	102□
※职业兴趣测量	□	□	□	□	103□
※职业能力测量	□	□	□	□	104□
※职业气质测量	□	□	□	□	105□
※职业指导课	□	□	□	□	106□
※劳动技术课	□	□	□	□	107□
其他：_____	□	□	□	□	108□
其他：_____	□	□	□	□	109□

17. 请谈谈你自从小学3年级以来各年的职业想法，及变化的原因？

(1)小学6年级所想将来从事的职业是_____。 111□
为什么？ 112□
113□

(2)初中一年级所想将来从事的职业是_____。 114□
为什么？ 115□
116□

(3)初二你所想将来从事的职业是_____。 117□
为什么？ 118□
119□

(4)初三你所想将来从事的职业是_____。 121□
为什么？ 122□
123□

(5)高一你所想将来从事的职业是_____。 124□
为什么？ 125□
126□

(6)高二你所想将来从事的职业是_____. 127□
为什么? 128□
129□

(7)高三你所想将来从事的职业是_____. 131□
为什么? 132□
133□

28. 你在考虑职业选择时，最需要的帮助是什么?

	非常重要	比较重要	不太重要	不重要	
※更多地了解职业信息	□	□	□	□	134□
※更多地了解自己的职业兴趣和职业能力	□	□	□	□	135□
※获得自己感兴趣的职业经历	□	□	□	□	136□
※帮助作出明智的职业决策	□	□	□	□	137□
其他:_____	□	□	□	□	138□

29. 你认为在现实的招生和招工中，男女是否享有完全平等的权力参加竞争? 139□

是 □; 不 □; 不知道 □.

如果回答"是"，请说明理由。

30. 在你的职业选择和学校职业指导工作方面，谈谈你的想法和体会?

谢谢你的合作!

APPENDIX 2: QUESTIONNAIRE ON CAREERS AWARENESS FOR EDINBURGH SECONDARY SCHOOL PUPILS

INTRODUCTION

Dear respondent,

I am a Ph.D research student at the Education Department of Edinburgh University, carrying out research in the field of careers guidance. I would be grateful if you could help my research by completing the following questionnaire.

I would like to ask you some questions about your future plans, about the guidance you have received, and about your job and your future education & training. At the age of 16+, you have to consider various options for your future. You might have thought about whether you should leave school or stay on to get more schooling, & possibly go on to college or university, or whether you should look for a job or enter Youth Training.

Please try to answer the questions as honestly as possible. All the information you give us will be kept in the strictest **confidence** and will only be seen by the researchers.

HOW TO ANSWER

For most of the questions there is a list of possible answers with a box beside each one. You only have to put a tick in the box: for example, ☑ .For some questions you have to put a number in or beside the box: for example, 3 or □3. If none of the answers exactly fits what you want to say, choose the answer that comes nearest. If you want, you can write comments beside the question, but please **always tick** the answer as well. If you don't know the answer to a question, please write DK (don't know). If a question does not apply to you, please write NA (not applicable).

For some questions you have to write your answer; please write clearly.

1. Sex: Male☐ Female☐

2. Age: _____Years_____Months

3. In which class are you presently?

S4☐ S5☐ S6☐

4.Are your parents, step-parents or guardians now...
tick one box from each

	mother	father
- in full-time paid employment	☐	☐
- in part-time paid employment	☐	☐
- unemployed and looking for work	☐	☐
- retired	☐	☐
- in full time unpaid work at home (e.g. housewife)	☐	☐
- unable to work (e.g. disabled)	☐	☐
- doing something else full-time (e.g. on a course)	☐	☐
- dead	☐	☐
- don't know	☐	☐

5 Please tell me about your parents, step-parents or guardians' jobs. If they are not working at the moment, please tell me about the most recent job each has held.

	mother	father
In what type of business do they work (e.g. shop, school)?	----------	----------
	----------	----------
What is the name of the job (e.g. Primary school teacher, bank clerk, Joiner)? Please be specific.	----------	----------
	----------	----------

5.1. What is their employment status? Tick one box from each.

	mother	father
Manager	☐	☐
Foreman	☐	☐
Employee	☐	☐

6. Is either of them self-employed? Tick one box from each.

	mother	father
Yes	☐	☐
No	☐	☐

7. How old were they when they left school? Tick one box for each.

	mother	father
15 old or less	☐	☐
16 years old	☐	☐
17 years old	☐	☐
18 years old or more	☐	☐
Don't know	☐	☐

8. What qualifications have they got from courses they took since they left school? Tick all that apply.

	mother	father
-. No qualification taken since leaving school	☐	☐
-. Non-advanced qualification (e.g. ONC, City and Guilds, SEN, TOPS, RSA, Highers)	☐	☐
-. Advanced qualification but not a degree (e.g. teaching diploma)	☐	☐
-. Degree or above (e.g. BSc, BEd, MA)	☐	☐
-. Don't know	☐	☐

9. How many elder brothers and sisters do you have, if any? _____

10. At what stage do you expect to leave secondary school?

S4☐ S5☐ S6☐ Do not know☐

11. If you plan to go on to higher education, what Certificates, Diplomas or Degree do you hope to get by the end of your education?

_____

12. If you don't plan to go on to higher education, what are your career plans?

_____

_____

_____

_____

13. Please indicate under the appropriate columns which (if any) subjects you are taking in the Scottish Examination Board examinations.

	Standard grade		**Higher grade**		**Certificate of Sixth Year Studies**
	Subject	Level	subject	Level	Subject
eg	English	General			
1					
2					
3					
4					
5					
6					
7					
8					

14. If your have already taken some Scottish Examination Board examinations, please indicate the appropriate columns which (if any) subjects you have passed.

	Standard grade		**Higher grade**		**Certificate of Sixth Year Studies**
	Subject	Level	subject	Level	Subject
1					
2					
3					
4					
5					
6					
7					
8					

15. If you could choose to do any kind of work, what sorts of jobs would you like to do? Rank the following groupings of occupations from the *most preferred* occupation (1) to the *least preferred* one (17).

Group of occupations	**Ranking**
- Administrative and Clerical	☐
- Agriculture, Horticulture, Forestry and Fisheries	☐
- Art and Design	☐
- Engineering/ Technological	☐
- Scientific	☐
- Processing and Manufacture	☐
- Building	☐
- Hotel and Catering	☐
- Personal service and Retail	☐
- Health service	☐
- Transport and Wholesale	☐
- Community and Teacher	☐
- Sport and Leisure	☐
- Artistic	☐
- Military	☐
- Other (please fill in if you choice was not on the list)	
_____	☐

16. If you could choose to do any kind of work, what specific jobs would you like to do (e.g. model, musician, photographer)?

First choice_____

Second choice _____

17. Thinking <u>realistically</u>, what sorts of specific jobs do you think you will end up doing? (e.g. primary school teacher, bank clerk, joiner)

First choice_____

Second choice_____

18. What sorts of specific jobs do you think your parents would like you to do (e.g. solicitor, geologist, bus driver)?

First choice_____

Second choice _____

19. Have you discussed with a careers officer, or a careers teacher/guidance teacher your future career? If yes, please answer question 19.1. If not, go direct to question 20.

19.1 What sorts of specific jobs have they suggested you could do (e.g. telephone operator, tailor, dental technician)?

First choice_____

Second choice _____

20. People have different reasons for choosing their careers. How important is each of the following factors for you in considering your careers choices. Please rank the factors from *the most important* (1) to the *least important* one (10).

Reasons	**Ranking**
- Allows use of my ability	☐
- Working conditions	☐
- Secure and stable employment	☐
- Chance to advance	☐
- Status/prestige	☐
- Job opportunity	☐
- Interest	☐
- Benefit to society	☐
- My qualifications	☐
- Salary	☐
- Other (please say what)_____	☐

21. Please rate how helpful the following were in helping you make careers choices.

Source/People/etc.	A lot of help	Some help	No help	Not applicable
- Careers officer/careers teacher	☐	☐	☐	☐
- Guidance teacher	☐	☐	☐	☐
- Other teachers	☐	☐	☐	☐
- Father	☐	☐	☐	☐
- Mother	☐	☐	☐	☐
- Other relatives	☐	☐	☐	☐
- Friends	☐	☐	☐	☐
- Working people you have met	☐	☐	☐	☐
- Work experience	☐	☐	☐	☐
- Careers counselling	☐	☐	☐	☐
- Careers day	☐	☐	☐	☐
- Careers library	☐	☐	☐	☐
- Vocational interest test	☐	☐	☐	☐
- Vocational ability test	☐	☐	☐	☐
- Life and Work (course)	☐	☐	☐	☐

22. Young people often change their careers plans. Please write down what your job ideas (e.g. Primary school teacher, Bank clerk, Joiner) were during your school life, for these years that apply to you.

-. In S1 I wanted to be a _____(first choice job)
or_____(second choice job).
-. In S2 I wanted to be a _____(first choice job)
or _____(second choice job).
- In S3 I wanted to be a _____(first choice job)
or _____(second choice job).
- In S4 I want/ed to be a _____(first choice job)
or _____(second choice job).
- In S5 I want/ed to be a _____(first choice job)
or _____(second choice job).
- In S6 I want/ed to be a _____(first choice job)
or _____(second choice job).

If you changed your careers plans during your school life, can you tell me what led you to these changes? We are very interested in what you can tell us here.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

23. How satisfied are you with your subject choices.

	Very satisfied	Quite satisfied	Dissatisfied	Very dissatisfied	Not applicable
- 2nd year subjects	☐	☐	☐	☐	☐
- 4th year subjects	☐	☐	☐	☐	☐

24. How important was each of following reasons for your school subject choices? Please rank the reasons from the most important (1) to least important one (5).

Reasons	**The second year subject choices**	**The fourth year subject choices (if applicable)**
- Good teacher	☐	☐
- Good exam results	☐	☐
- Interest	☐	☐
-Useful for future careers	☐	☐
- Others (specify)		
_____	☐	☐

25. If you have ever used a computer package, such as JIIG-CAL, CENTIGRADE, in considering your careers or subject choices, please answer the following. If not, go to question 26.

25.1 What is the name of the computer package you used _____

25.2 Did you enjoy using it?

A great deal ☐
A little ☐
Not at all ☐

25.3. Was it useful for your career choice?

Very useful ☐
Quite useful ☐
Not very useful ☐
Not useful at all ☐

25.4 Please explain your answer:

_____
_____
_____
_____
_____
_____

26. How important are the following sources of help in making your careers choices?

	Very important	Quite important	Not very important	Not important
- Help in obtaining more careers information	☐	☐	☐	☐
- Help in becoming more aware of vocational interests and abilities	☐	☐	☐	☐
- Help in making wise educational and vocational decisions	☐	☐	☐	☐
- Others: (Please specify) _____ _____ _____	☐	☐	☐	☐

27. Please talk about your needs for school careers guidance.

28. In the following space, please add any other comments/suggestions about your experience of careers guidance (such as careers visits, work experience, careers days, careers librarys, computer-assisted careers guidance and careers counselling, etc.).

Thank you for your help.

Zhang Weiyuan
Department of Education
University of Edinburgh
10 Buccleuch Place
Edinburgh EH8 9JT

APPENDIX 3: QUESTIONNAIRE FOR SHANGHAI SCHOOL GUIDANCE TEACHERS

INTRODUCTION

Dear respondent,

I am a Ph.D research student at the Education Department of Edinburgh University, carrying out research in the field of careers guidance. I would be grateful if your could help my research by completing the following questionnaire.

Pupils' careers choices are influenced by many factors, such as family, education and society. I would like to know your views in this respect, based on your experience of school careers guidance.

HOW TO ANSWER

For most of the questions these is a list of possible answers with a box beside each one. You only have to put a tick in the box: for example, ☑ . For some questions you have to put a number in or beside the box: for example, 3 or ☐3 . If none of the answers exactly fits what you want to say, choose the answer that comes nearest. If you want, you can write comments beside the question, but please **always tick** the answer as well. If you don't know the answer to a question, please write DK (don't know). If a question does not apply to you, please write NA (not applicable). For other questions you have to write your answer.

School _____

1. Sex: Male☐ Female☐

2. Age: 25 or under☐ 26--35☐ 36--45☐ 46--55☐ 56 or over☐

3. Your work position Guidance teacher☐ Careers teacher☐

4. How long have you done careers guidance? _____ years.

5. Have you accepted training of careers guidance?

Yes☐ No☐

If your answer is "yes", please answer question 6. If your answer is "no", go directly to question 7.

6. When, where and how long did you accepted training of careers guidance? When? _____.

Where? _____.

How long? _____.

7. Compared with other schools, most pupils' study attainment in your school are

very low☐ low☐ average☐ above average☐ high ☐

8. Here is a list of statements about careers guidance, I would like you to say how far you agree or disagree with them, *based on your experience of careers guidance in your school.* Put a tick in the box that is closest to your way of thinking.

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
	1	2	3	4	5
- Most school leavers have little choice about their career	☐	☐	☐	☐	☐
- Careers guidance is intended to match people's interests and abilities with job requirements	☐	☐	☐	☐	☐
- Learning to choose a career is a process that takes a number of years	☐	☐	☐	☐	☐
- School careers guidance should teach pupils the skills for making career decisions by themselves	☐	☐	☐	☐	☐
- Careers guidance should start in schools as early as possible	☐	☐	☐	☐	☐
- School careers guidance should widely develop pupils' interests in work	☐	☐	☐	☐	☐
- School careers guidance should widely develop pupils' vocational abilities	☐	☐	☐	☐	☐

- Pupils' exam results are the most important influence on their careers choices	☐	☐	☐	☐	☐
- Pupils' family background is the most important influence on their careers choices	☐	☐	☐	☐	☐

9. Please rank the attractiveness each group of occupations to school leavers, based on your school careers guidance experience.

	Very attractive				Unattractive
	1	2	3	4	5
- Administrative and Clerical	☐	☐	☐	☐	☐
- Agriculture, Horticulture, Forestry and Fisheries	☐	☐	☐	☐	☐
- Art and Design	☐	☐	☐	☐	☐
- Engineering/Technological	☐	☐	☐	☐	☐
- Scientific	☐	☐	☐	☐	☐
- Processing and Manufacture	☐	☐	☐	☐	☐
- Building	☐	☐	☐	☐	☐
- Hotel and Catering	☐	☐	☐	☐	☐
- Personal service and Retail	☐	☐	☐	☐	☐
- Health service	☐	☐	☐	☐	☐
- Transport and Wholesale	☐	☐	☐	☐	☐

- Community and Teacher	☐	☐	☐	☐	☐
- Sport and Leisure	☐	☐	☐	☐	☐
- Artistic	☐	☐	☐	☐	☐
- Military	☐	☐	☐	☐	☐
- Other (please fill in if you choice was not on the list) _____	☐	☐	☐	☐	☐

10. Pupils have different reasons for choosing their careers. How important is each of the following factors for pupils in considering their careers choices, based on your school careers guidance experience? Please rank from *most important (1)* to *least important (10)?*

Reasons	Ranking
- Use of ability	☐
- Working conditions	☐
- Secure and stable employment	☐
- Chance to advance	☐
- Status/prestige	☐
- Job opportunity	☐
- Interest	☐
- Benefit to society	☐
- Personal Qualifications	☐
- Salary	☐
- Other (please say what)._____	☐

11. Do your think the gender of female is a limitation of careers choice in your school situation?

Yes ☐ No ☐ Don't know ☐

11.1. If your answer is "yes", please give your reasons.

12. What, do your think, are the major problems of careers guidance in your school? What is your opinion of how to improve careers guidance in your school?

Many thanks for your help.

Zhang Weiyuan
Department of Education
University of Edinburgh
10 Buccleuch Place
Edinburgh EH8 9JT

中学班主任问卷表

一、指导语：

亲爱的教师，你好！

我叫张伟远，是英国爱丁堡大学教育系的博士研究生，专门从事中学生的职业指导研究。

学生的职业选择受到多方面因素的影响，包括社会，学校和家庭等。我想了解根据你个人的经历和体会，你在这方面的观点和看法。

二、填写注意事项：

1. 填写方法：
   (1) 在几个答案中选择一个最符合你的情况的答案，在此答案后的方格内打个"√"，如：☑。
   (2) 填写合适的答案。
   (3) 填写次序，如 ☑3，或 □3。
   (4) 如果某个问题不符合你的情况，从而无法回答，请写上"不符合"。
   (5) 如果可选择的答案中没有一个完全符合你的真实情况，请选择一个最接近你的真实情况的答案。
2. 问卷右侧（竖线外）的数字及方格是供计算机使用的，不必填写。
3. 问卷中每一个题目，除"不符合"外，尽可能全部填写，请勿遗漏。
4. 问卷中如有不明白之处，请举手询问。

谢谢你的合作。

1994年3月10日

问卷表　　学校_____

性别：　男□；　女□

年龄：　25岁以下□；26-35岁□，36-45岁□
46-55岁□；　56岁以上□。

你的职业：

到主任□；　职业指导教师□。

你从事职业指导工作多长时间？

_____月

你接受过职业指导培训吗？

是□；　不□

如果你接受过职业培训，请回答下面二个问题：

在什么地点接受培训_____。

在什么时候接受培训_____。

培训时间的长短_____月。

你所从事职业指导的学校，在学生学习成绩方面是属于：

很差□，较差□；中等□；中等以上□，好□。

不面是一些同志关于职业指导的观点，根据你的实践经验，来选择在何种程度你同意或不同意这些观点。

上

	非常同意	同意	不确定	不同意	坚决不同意	
学生没有任何自由选择职业的机会	□	□	□	□	□	14 □
职业指导在于匹配学生的兴趣、能力和工作要求	□	□	□	□	□	15 □
职业选择是一个长期的过程	□	□	□	□	□	16 □
学校职业指导应该教会学生作出职业决策的能力	□	□	□	□	□	17 □
职业指导应尽早开始	□	□	□	□	□	18 □
学校职业指导应该广泛发展学生的工作兴趣	□	□	□	□	□	19 □
学校职业指导应广泛发展学生的职业能力	□	□	□	□	□	21 □
学生的考试成绩是影响学生职业选择的关键因素	□	□	□	□	□	22 □

出的家庭背景是影响学生
他选择的最重要的因素。 □ □ □ □ □ 23 □

面有15位职业群，请根据你校学生的情况填写下表。

	很吸引人 1	比较吸引人 2	一般 3	不太吸引人 4	不吸引人 5		
办公室职业	□	□	□	□	□	24	□
农、林、渔、园艺业	□	□	□	□	□	25	□
艺术设计	□	□	□	□	□	26	□
工程/技术	□	□	□	□	□	27	□
科学	□	□	□	□	□	28	□
加工业和制造业	□	□	□	□	□	29	□
建筑业	□	□	□	□	□	31	□
旅馆服务和乡厅服务	□	□	□	□	□	32	□
零售业和其他服务业	□	□	□	□	□	33	□
卫生健康	□	□	□	□	□	34	□
交通	□	□	□	□	□	35	□
教师和社会服务	□	□	□	□	□	36	□
运动和闲暇	□	□	□	□	□	37	□
艺术	□	□	□	□	□	38	□
等P人	□	□	□	□	□	39	□

根据你校学生的一般情况，依次排列学生在职业考虑时所强调的因素（1为最重要的……10为最不重要的，请不要重复数字）。

* 发展自己的能力	□	41	□
* 工作条件	□	42	□
* 雇用的稳定性	□	43	□
* 晋升的机会	□	44	□
* 职业的社会地位	□	45	□
* 工作机会	□	46	□
* 符合自己的兴趣	□	47	□
* 对社会的贡献	□	48	□
* 自己的学业成绩	□	49	□
* 工资和奖金	□	51	□

你认为男女在招生、招工及职业选择中是否平等？ 52 □

是 □　　否 □　　不知道 □

11.1 如果回答"是"，请说明其理由。

你认为你校职业指导方面还存在什么问题？你认为应该如何改进？

APPENDIX 4: QUESTIONNAIRE FOR EDINBURGH CAREERS OFFICERS

INTRODUCTION

Dear respondent,

I am a Ph.D research student at the Education Department of Edinburgh University, carrying out research in the field of careers guidance. I would be grateful if your could help my research by completing the following questionnaire.

Pupils' careers choices are influenced by many factors, such as family, education and society. I would like to know your views in this respect, based on your experience of school careers guidance.

HOW TO ANSWER

For most of the questions these is a list of possible answers with a box beside each one. You only have to put a tick in the box: for example, ☑ . For some questions you have to put a number in or beside the box: for example, 3 or ☐ 3 . If none of the answers exactly fits what you want to say, choose the answer that comes nearest. If you want, you can write comments beside the question, but please **always tick** the answer as well. If you don't know the answer to a question, please write DK (don't know). If a question does not apply to you, please write NA (not applicable). For other questions you have to write your answer.

1. Sex: Male☐ Female☐

2. Age: 25 or under☐ 26--35☐ 36--45☐ 46--55☐ 56 or over☐

3. Your work position

Area careers officer☐ Senior careers officer☐

Careers officer☐ Careers master/mistress☐

Careers teacher☐ Guidance teacher☐

4. How long have you worked in careers service or school guidance? _____ years.

5. Do you possess a qualification in careers guidance or school guidance?

Yes☐ No☐

If your answer is "yes", please answer question 5.1 and 5.2. If your answer is "no", go directly to question 6.

5.1 What qualification in careers guidance or school guidance do you have? _____.

5.2 **At which university or college did you study careers guidance or school guidance?** _____.

6. Please answer the following questions about one school for which you have a careers guidance responsibility at present.

6.1 The name of school _____ **(only fill in one secondary school)**

6.2 This school catchment is mainly in a

Low income area☐ Middle income area☐

High income area☐ Mixed income area☐

6.3 Compared with other schools, most pupils' academic achievements in your school are

very low☐ low☐ average☐ above average☐ high ☐

6.4 Which is the main method you use for careers guidance at the different stages in this school? (tick one box for each).

	S1	S2	S3	S4	S5	S6
Individual guidance	☐	☐	☐	☐	☐	☐
Group guidance	☐	☐	☐	☐	☐	☐
No careers guidance	☐	☐	☐	☐	☐	☐

7. Here is a list of statements about careers guidance, I would like you to say how far you agree or disagree with them, *based on your experience of careers guidance in your school.* Put a tick in the box that is closest to your way of thinking.

	Strongly agree	**Agree**	**Unsure**	**Disagree**	**Strongly disagree**
	1	2	3	4	5
- Most school leavers have little choice about their careers	☐	☐	☐	☐	☐
- Careers guidance is intended to match people's interests and abilities with job requirements	☐	☐	☐	☐	☐
- Learning to choose a career is a process that takes a number of years	☐	☐	☐	☐	☐
- School careers guidance should teach pupils the skills for making career decisions by themselves	☐	☐	☐	☐	☐

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
	1	2	3	4	5
- School careers guidance should widely develop pupils' vocational abilities	☐	☐	☐	☐	☐
- Pupils' exam results are the most important influence on their careers choices	☐	☐	☐	☐	☐
- Pupils' family background is the most important influence on their careers choices	☐	☐	☐	☐	☐

8. Please rank the attractiveness of each group of occupations to school leavers, based on your school careers guidance experience.

	Very attractive				Unattractive
	1	2	3	4	5
- Administrative and Clerical	☐	☐	☐	☐	☐
- Agriculture, Horticulture, Forestry and Fisheries	☐	☐	☐	☐	☐
- Art and Design	☐	☐	☐	☐	☐
- Engineering/Technological	☐	☐	☐	☐	☐
- Scientific	☐	☐	☐	☐	☐
- Processing and Manufacture	☐	☐	☐	☐	☐
- Building	☐	☐	☐	☐	☐
- Hotel and Catering	☐	☐	☐	☐	☐
- Personal service and Retail	☐	☐	☐	☐	☐
- Health service	☐	☐	☐	☐	☐
- Transport and Wholesale	☐	☐	☐	☐	☐
- Community and Teacher	☐	☐	☐	☐	☐
- Sport and Leisure	☐	☐	☐	☐	☐
- Artistic	☐	☐	☐	☐	☐
- Military	☐	☐	☐	☐	☐
- Other (please fill in if you choice was not on the list) _____	☐	☐	☐	☐	☐

9. Pupils have different reasons for choosing their careers. How important is each of the following factors for pupils in considering their careers choices, based on your school careers guidance experience? Please rank from *most important (1)* to *least important (10)?*

Reasons	Ranking
- Use of ability	☐
- Working conditions	☐
- Secure and stable employment	☐
- Chance to advance	☐
- Status/prestige	☐
- Job opportunity	☐
- Interest	☐
- Benefit to society	☐
- Personal Qualifications	☐
- Salary	☐
- Other (please say what) _____	☐

10. If you have ever used a computer package, such as JIIG-CAL, CENTIGRADE, to help the pupils in this school to choose careers, please complete this section. If not, continue to question 11.

10.1. Names of the computer programmes used:

_____

10.2. How useful were these in helping pupils of different ages in making their careers choices?

Name of programme _____ .

	S1	S2	S3	S4	S5	S6
Very useful	☐	☐	☐	☐	☐	☐
Quite useful	☐	☐	☐	☐	☐	☐
Not very useful	☐	☐	☐	☐	☐	☐
Not very useful at all	☐	☐	☐	☐	☐	☐

Please state your reasons for allocating usefulness.

_____

_____

_____

_____

_____

_____

The name of programme_____

	S1	S2	S3	S4	S5	S6
Very useful	☐	☐	☐	☐	☐	☐
Quite useful	☐	☐	☐	☐	☐	☐
Not very useful	☐	☐	☐	☐	☐	☐
Not very useful at all	☐	☐	☐	☐	☐	☐

11. What, do your think, are the major problems of careers guidance in the school which is mentioned in question 6.1.?

12. What is your opinion of how to improve careers guidance in the school which is mentioned in question 6.1?

Many thanks for your help.

Weiyuan Zhang
Department of Education
University of Edinburgh
10 Buccleuch Place
Edinburgh EH8 9JT

APPENDIX 5: LIST OF INTERVIEWEES

1. Main interviewees in Shanghai

Jin Yiming	President of Chinese Careers Guidance Association
Wen Youxing	Councillor of Chinese Careers Guidance Association
Liu Jiangnong	Deputy director of Chinese Careers Guidance Association
Fai Eillen	Director of Careers Guidance, Shanghai Education Bureau
Jin Zinang	Director of Careers Guidance, Luwan Education Bureau, Shanghai
Anonymous	Director of Shanghai Admission Committee, Shanghai
Tong Qinkang	Director of Luwan Admission Committee, Shanghai
Zhang Yushu	Deputy director of Luwan Education Bureau, Shanghai
Jin Dajun	Director of Shanghai Branch, Chinese Vocational Education Association
Fan Jianzhong	Officer at Shanghai Branch, Chinese Vocational Education Association
Li Yisheng	Officer, Chinese Vocational Education Association
Shao Eiling	Associate professor of Vocational and Technical Education at the East China Normal University

Lu Zhiquan	Principal at Bile Secondary School, Shanghai
Ma Youlian	Principal at Heinang Secondary School, Shanghai
Yi Dayuan	Guidance teacher at Heinang Secondary School, Shanghai
Anonymous	Director of Teaching at School 1, Shanghai
Anonymous	Guidance teacher at School 1, Shanghai
Anonymous	Guidance teacher at School 1, Shanghai
Anonymous	Director of Teaching at school 2, Shanghai
Anonymous	Guidance teacher at school 2, Shanghai
Anonymous	Guidance teacher at school 2, Shanghai
Anonymous	Director of Teaching at School 3, Shanghai
Anonymous	Guidance teacher at School 3, Shanghai
Anonymous	Guidance teacher at School 3, Shanghai

2. Main interviewees in Edinburgh

Bill Leslie	Director of Training Management, Lothian and Edinburgh Enterprise Limited
Peter Douglass	Area careers officer, Information Unit, Lothian Region Careers Service
Paul Wheeler	Assistant regional careers officer, Lothian Region Careers Service
Jane Macdonald	Area careers officer, Careers Action Plans, Lothian Region Careers Service
Rose McKendry	Senior careers officer, Informaion Unit, Lothian Region Careers Service
Jean Stewart	Senior lecturer, Careers Guidance in the Eurogroup, Napier University
Elaine Wilson	Lecturer, Careers Guidance in the Eurogroup, Napier University
Sheila Semple	Lecturer in Careers Guidance, Jordanhill College of Education, Glasgow
Anonymous	Careers officer at School A, Edinburgh
Anonymous	Guidance teacher at School A, Edinburgh
Anonymous	Guidance teacher at School A, Edinburgh
Anonymous	Careers officer at School B, Edinburgh
Anonymous	Guidance teacher at School B, Edinburgh
Anonymous	Careers master at School C, Edinburgh

Anonymous	Researcher of JIIG-CAL, Careers Research Centre, University of Edinburgh
Anonymous	Pupil in S4 at a School, Edinburgh
Anonymous	Pupil in S4 at a School, Edinburgh
Anonymous	Pupil in S4 at a School, Edinburgh
Anonymous	Pupil in S4 at a School, Edinburgh

APPENDIX 6: TABLES 4.3; 4.4; 4.5; 4.6; 4.11; 4.16; 4.17; 4.18; 4.19; 4.20; 4.21 AND 4.22.

Table 4.3. Boys' and girls' top ten jobs in each school year (in percentages)

Occupation	boys (P6) N=313	Occupation	girls (P6) N=379
1. Scientist	31.9	1. Teacher	34.9
2. Soldier	11.5	2. Scientist	14.3
3. Teacher	8.3	3. Doctor	10.1
4. Doctor	6.1	4. Artist	9.0
5. Artist	6.1	5. Sportswoman	2.6
6. Manager	3.8	6. Manager	2.6
7. Sportsman	3.5	7. Lawyer	2.1
8. Businessman	3.5	8. Soldier	2.1
9. Policeman	2.6	9. Designer	1.6
10. Pilot	2.2	10. Clerk	1.3

J1	N=313	J1	N=379
1. Scientist	23.0	1. Teacher	14.8
2. Teacher	8.3	2. Doctor	14.3
3. Soldier	8.3	3. Scientist	12.7
4. Doctor	7.7	4. Artist	10.8
5. Artist	7.3	5. Clerk	5.0
6. Manager	6.7	6. Lawyer	4.5
7. Businessman	5.4	7. Businesswoman	4.5
8. Sportsman	3.5	8. Manager	4.2
9. Pilot	3.5	9. Designer	3.4
10. Politician	1.9	10. Tour guide	1.6

J2	Boy N=313	J2	Girl N=379
1. Scientist	16.6	1. Scientist	10.6
2. Manager	11.5	2. Doctor	10.3
3. Businessman	8.9	3. Artist	9.5
4. Artist	7.0	4. Teacher	9.5
5. Clerk	6.7	5. Manager	8.5
6. Teacher	5.8	6. Clerk	7.7
7. Soldier	5.4	7. Businesswoman	5.6
8. Doctor	4.5	8. Lawyer	4.2
9. Sportsman	2.2	9. Designer	4.0
10. Pilot	2.2	10. Accountant	2.9

J3	N=240	J3	N=301
1. Businessman	13.3	1. Clerk	13.0
2. Manager	12.1	2. Scientist	8.3
3. Scientist	10.8	3. Doctor	8.0
4. Clerk	8.8	4. Designer	8.0
5. Teacher	5.4	5. Manager	8.0
6. Doctor	5.0	6. Businesswoman	7.6
7. Artist	4.2	7. Teacher	6.3
8. Accountant	3.3	8. Artist	5.6
9. Lawyer	2.5	9. Lawyer	5.3
10. Technician	2.1	10. Accountant	5.3

S1	N=180	S1	N=209
1. Businessman	13.9	1. Doctor	12.4
2. Manager	12.2	2. Clerk	11.5
3. Scientist	11.7	3. Businesswoman	10.0
4. Doctor	8.9	4. Manager	8.6
5. Clerk	6.7	5. Scientist	7.2
6. Accountant	5.6	6. Teacher	6.7
7. Artist	5.0	7. Lawyer	6.2
8. Lawyer	3.3	8. Designer	5.7
9. Teacher	2.2	9. Artist	5.3
10. Technician	2.2	10. Accountant	4.8

S2	N=119	S2	N=134
1. Businessman	22.7	1. Businesswoman	12.7
2. Manager	15.1	2. Clerk	11.9
3. Scientist	9.2	3. Doctor	10.4
4. Doctor	7.6	4. Scientist	8.2
5. Clerk	3.4	5. Manager	6.7
6. Lawyer	3.4	6. Artist	6.0
7. Artist	3.4	7. Lawyer	5.2
8. Accountant	2.5	8. Designer	5.2
9. Policeman	2.5	9. Teacher	5.2
10. Computer operator	1.7	10. Accountant	4.5

S3	N=57	S3	N=65
1. Businessman	31.6	1. Businesswoman	21.5
2. Scientist	12.3	2. Clerk	15.4
3. Manager	10.5	3. Lawyer	9.2
4. Lawyer	8.8	4. Accountant	4.6
5. Clerk	7.0	5. Doctor	6.2
6. Accountant	5.3	6. Manager	6.2
7. Doctor	3.5	7. Scientist	3.1
8. Politician	3.5	8. Artist	3.1
9. Computer operator	1.8	9. Designer	3.1
10. Technician	1.8	10. Journalist	1.5

Table 4.4. Pupils' top ten jobs in three schools (in percentages)

Low academic school		Mixture academic school		High academic school	
Primary 6	N=217	Primary 6	N=240	Primary 6	N=234
1. Scientist	25.7	1. Teacher	30.0	1. Scientist	23.9
2. Teacher	15.2	2. Scientist	17.9	2. Teacher	22.6
3. Doctor	11.1	3. Soldier	9.2	3. Doctor	7.3
4. Artist	8.8	4. Artist	7.5	4. Artist	6.8
5. Soldier	6.9	5. Doctor	6.7	5. Manager	3.4
6. Manager	4.1	6. Sportsman /woman	4.6	6. Businessman /woman	3.4
7. Designer	1.8	7. Manager	2.7	7. Soldier	3.0
8. Businessman /woman	1.4	8. Policeman /woman	2.1	8. Sportsman /woman	3.0
9. Sportsman /woman	1.4	9. Lawyer	1.7	9. Pilot	2.1
10. Shop assistant	1.4	10. Pilot	1.7	10. Translator	1.7

Junior 1	N=217	Junior 1	N=240	Junior 1	N=234
1. Scientist	17.5	1. Teacher	15.8	1. Scientist	20.1
2. Teacher	10.6	2. Scientist	14.6	2. Doctor	9.8
3. Doctor	10.1	3. Doctor	13.8	3. Teacher	9.0
4. Artist	8.8	4. Artist	11.3	4. Artist	7.7
5. Clerk	5.1	5. Manager	5.4	5. Businessman /woman	6.8
6. Lawyer	4.6	6. Soldier	5.4	6. Manager	6.4
7. Manager	4.1	7. Businessman /woman	3.8	7. Designer	3.8
8. Businessman /woman	4.1	8. Clerk	3.3	8. Soldier	3.8
9. Soldier	2.8	9. Lawyer	3.3	9. Sportsman /woman	2.6
10. Sportsman /woman	2.8	10. Pilot	2.5	10. Translator	2.6

Junior 2	N=217	Junior 2	N=240	Junior 2	N=234
1. Scientist	13.4	1. Doctor	11.7	1. Scientist	17.1
2. Clerk	9.2	2. Artist	10.4	2. Manager	11.5
3. Manager	8.8	3. Teacher	10.0	3. Businessman /woman	9.4
4. Artist	7.8	4. Scientist	9.6	4. Teacher	7.3
5. Doctor	6.0	5. Manager	9.2	5. Artist	6.8
6. Teacher	6.0	6. Clerk	8.3	6. Doctor	5.1
7. Businessman /woman	4.6	7. Businessman /woman	7.1	7. Clerk	4.3
8. Lawyer	4.1	8. Designer	3.8	8. Designer	3.8
9. Shop assistant	3.7	9. Soldier	2.5	9. Lawyer	2.6
10. Soldier	3.2	10. Lawyer	2.1	10. Soldier	2.6

Junior 3	N=175	Junior 3	N=187	Junior 3	N=179
1. Scientist	8.6	1. Clerk	19.3	1. Businessman /woman	17.3
2. Clerk	8.6	2. Manager	12.8	2. Scientist	10.1
3. Businessman /woman	8.0	3. Scientist	9.6	3. Manager	8.9
4. Manager	7.4	4. Doctor	8.6	4. Doctor	5.6
5. Lawyer	5.7	5. Teacher	6.4	5. Teacher	5.0
6. Teacher	6.3	6. Artist	5.3	6. Clerk	5.0
7. Artist	5.7	7. Businessman /woman	5.3	7. Accountant	4.5
8. Designer	5.7	8. Lawyer	3.2	8. Designer	4.5
9. Accountant	5.7	9. Accountant	3.2	9. Artist	3.9
10. Doctor	5.7	10. Policeman /woman	2.7	10. Lawyer	3.4

Senior 1	N=130	Senior 1	N=130	Senior 1	N=129
1. Businessman /woman	12.3	1. Clerk	16.2	1. Businessman /woman	16.3
2. Doctor	8.5	2. Manager	16.2	2. Scientist	11.6
3. Accountant	7.7	3. Doctor	14.6	3. Doctor	9.3
4. Lawyer	6.9	4. Scientist	9.2	4. Manager	7.8
5. Manager	6.9	5. Businessman /woman	6.9	5. Artist	6.2
6. Scientist	6.9	6. Lawyer	6.2	6. Designer	5.4
7. Clerk	6.9	7. Teacher	4.6	7. Clerk	4.7
8. Teacher	6.2	8. Accountant	4.6	8. Teacher	3.1
9. Artist	5.4	9. Artist	3.8	9. Accountant	3.1
10. Designer	3.1	10. Policeman /woman	2.3	10. Translator	2.3

Senior 2	N=73	Senior 2	N=86	Senior 2	N=80
1. Businessman /woman	28.7	1. Manager	15.1	1. Businessman /woman	13.8
2. Lawyer	6.9	2. Clerk	12.8	2. Scientist	12.5
3. Doctor	5.7	3. Doctor	11.6	3. Manager	11.3
4. Manager	5.7	4. Businessman /woman	9.3	4. Doctor	10.0
5. Scientist	4.6	5. Scientist	9.3	5. Clerk	6.3
6. Artist	4.6	6. Artist	5.8	6. Designer	3.8
7. Teacher	4.6	7. Accountant	5.8	7. Artist	3.8
8. Accountant	4.6	8. Lawyer	4.7	8. Translator	2.5
9. Clerk	4.6	9. Designer	3.5	9. Politician	2.5
10. Shop Assistant	3.4	10. Technician	3.5	10. Public relation	2.5

Senior 3	N=44	Senior 3	N=42	Senior 3	N=36
1. Businessman /woman	40.9	1. Clerk	28.6	1. Businessman /woman	25.0
2. Lawyer	9.1	2. Manager	14.3	2. Scientist	16.7
3. Doctor	9.1	3. Businessman /woman	11.9	3. Lawyer	11.1
4. Scientist	4.5	4. Accountant	11.9	4. Manager	8.3
5. Clerk	4.5	5. Lawyer	7.1	5. Translator	8.3
6. Accountant	4.5	6. Designer	4.8	6. Doctor	8.3
7. Artist	2.3	7. Teacher	4.8	7. Artist	8.3
8. Manager	2.3	8. Doctor	2.4	8. Designer	8.3
		9. Artist	2.4	9. Journalist	8.3
		10. Computer operator	2.4	10. Politician	2.8

Table 4.5. pupils' preferred work enterprises

	Frequency (f)	Percentage (%)
State enterprise	87	12.6
Collective enterprise	15	2.2
Joint-venture enterprise	480	69.4
Private enterprise	100	14.5
Self-employed	10	1.4
Total	692	100.0

Table 4.6. The mean, standard deviation (SD) and ranking of the people from whom pupils get help in making careers decisions

People	Mean	SD	Ranking
Father	1.50	0.64	1
Mother	1.49	0.63	2
Friends	1.06	0.64	3
Guidance teacher	0.96	0.68	4
Working people you have met	0.88	0.76	5
Relatives	0.73	0.64	6
Other teachers	0.55	0.60	7

Mean: 2 = A lot of help 1 = some help 0 = no help
Ranking 1= most helpful to 7= least helpful

Table 4.11. Pupils' job level expectations

Level	Number (N)	Percentage (%)
Professional	119	17.2
Managerial and technical	187	27.0
Skilled (non-manual)	245	35.4
Skilled (manual)	23	3.3
Partly skilled	3	0.4
Unskilled	0	0
Don't know	115	16.6
Total	692	100.0

Table 4.16. Boys' and girls' job type expectations (in percentages)

Type	Boys	Girls
Realistic	10.0	2.5
Investigative	12.3	3.8
Social	9.6	21.8
Enterprising	39.2	27.1
Artistic	4.2	7.9
Conventional	24.6	36.9

Table 4.17. Pupils' job type expectations in three schools (in percentages)

Type	Low academic school	Mixed academic school	High academic school
Realistic	6.5	7.0	4.1
Investigative	7.7	3.7	11.9
Social	13.7	20.9	13.4
Enterprising	31.5	26.0	40.7
Artistic	8.9	4.2	6.2
Conventional	31.5	38.1	23.7

Table 4.18. The change in pupils' job level aims

	Frequency(f)	Percentage (%)
Primary 6 --- Junior 1	310	44.9
Junior 1 --- Junior 2	299	43.2
Junior 2 --- Junior 3	242	44.9
Junior 3 --- Senior 1	149	38.5
Senior 1 --- Senior 2	66	26.1
Senior 2 --- Senior 3	42	34.1

Table 4.19. The change in pupils' job type aims

	Frequency (f)	Percentage (%)
Primary 6 --- Junior 1	356	51.6
Junior 1 --- Junior 2	332	48.0
Junior 2 --- Junior 3	261	48.4
Junior 3 --- Senior 1	165	42.4
Senior 1 --- Senior 2	72	28.5
Senior 2 --- Senior 3	40	30.5

Table 4.20. The maximum changing values of pupils' job level aims

	Frequency (f)	Percentage (%)
Primary 6 -- Junior 1	147	21.3
Junior 1 -- Junior 2	178	25.8
Junior 2 -- Junior 3	165	23.9
Junior 3 -- Senior 1	97	14.0
Senior 1 -- Senior 2	53	7.7
Senior 2 -- Senior 3	51	7.4

Table 4.21. The maximum changing values of pupils' job type aims

	Frequency (f)	Percentage (%)
Primary 6 -- Junior 1	154	22.3
Junior 1 -- Junior 2	252	36.5
Junior 2 -- Junior 3	144	20.8
Junior 3 -- Senior 1	133	19.2
Senior 1 -- Senior 2	1	0.1
Senior 2 -- Senior 3	7	1.0

Table 4.22. Reasons why pupils change their career aims in each secondary school year (in percentages)

	1	2	3	4	5	6	7
P6 - J1	35	19.2	15.3	8.2	10.4	3.1	0
J1 - J2	18.6	22.5	17.7	15.2	4.9	8.9	0
J2 - J3	0	10.8	23.7	10.9	4.9	19.4	0
J3 - S1	0	6.6	21.9	12.0	10.5	31.9	0
S1 - S2	0	0	25.2	5.7	10.5	42.4	5.7
S2 - S3	0	0	22.5	5.6	8.4	43.0	12.1

Notes:

P6 -J1: Primary 6 to Junior 1

J1 - J2: Junior 1 to Junior 2

J2 - J3: Junior 2 to Junior 3

J3 - S1: Junior 3 to Senior 1

S1 - S2: Senior 1 to Senior 2

S2 - S3: Senior 2 to Senior 3

1 - School ideological education

2 - Fantasy and T.V./films/novels

3 - Personal experience (school activities and personal experience)

4 - Family (parents' jobs and parents' advice)

5 - Job status and job power

6 - Popular opinion

7 - Job opportunity

APPENDIX 7: TABLES 5.3; 5.4; 5.5; 5.11; 5.14; 5.19; 5.20; 5.21; 5.22 AND 5.23.

Table 5.3. Boys' and girls' top ten jobs in each school year (in percentages)

Occupation	boys (S1) N=147	Occupation	girls (S1) N=154
1. Artist	14.3	1. Teacher	18.8
2. Pilot	14.3	2. Doctor	11.0
3. Fireman	7.5	3. Nurse	9.7
4. Construction worker	6.1	4. Scientist	9.2
5. Sportsman	5.4	5. Lawyer	9.1
6. Scientist	5.4	6. Vet	7.8
7. Lawyer	4.8	7. Artist	4.5
8. Doctor	4.8	8. Childminder	3.9
9. Policeman	4.8	9. Hairdresser	3.9
10. Technician	4.1	10. Air hostess	3.2
S2	N=148	S2	N=149
1. Artist	12.8	1. Teacher	18.8
2. Pilot	9.6	2. Lawyer	13.4
3. Sportsman	7.4	3. Doctor	9.4
4. Teacher	6.8	4. Nurse	8.7
5. Scientist	6.1	5. Vet	7.4
6. Lawyer	5.4	6. Scientist	6.7
7. Technician	5.4	7. Childminder	6.0
8. Accountant	5.4	8. Clerk	4.7
9. Construction worker	5.4	9. Artist	3.4
10. Policeman	4.1	10. Hairdresser	3.4

S3	N=146	S3	N=157
1. Artist	8.2	1. Teacher	15.3
2. Sportsman	8.2	2. Nurse	9.6
3. Construction worker	7.5	3. Doctor	8.3
4. Accountant	7.5	4. Scientist	7.6
5. Teacher	7.5	5. Lawyer	5.7
6. Scientist	6.8	6. Vet	5.7
7. Technician	6.2	7. Childminder	5.7
8. Architect	6.2	8. Artist	4.5
9. Pilot	4.1	9. Designer	3.2
10. Lawyer	4.1	10. Occupational therapist	2.5
S4	N=145	S4	N=157
1. Architect	9.7	1. Teacher	13.4
2. Artist	7.6	2. Scientist	11.5
3. Teacher	7.6	3. Clerk	9.6
4. Construction worker	7.6	4. Nurse	8.9
5. Scientist	6.2	5. Childminder	5.7
6. Accountant	6.2	6. Lawyer	5.1
7. Sportsman	5.5	7. Doctor	5.1
8. Technician	4.8	8. Artist	5.1
9. Soldier	4.8	9. Occupational therapist	3.2
10. Pilot	4.1	10. Designer	3.2
S5	N=50	S5	N=62
1. Architect	20.0	1. Teacher	21.0
2. Accountant	12.0	2. Nurse	11.3
3. Artist	10.0	3. Scientist	6.5
4. Teacher	8.0	4. Lawyer	6.5
5. Doctor	6.0	5. Doctor	6.5
6. Sportsman	6.0	6. Designer	6.5
7. Scientist	4.0	7. Clerk	6.5
8. Technician	4.0	8. Childminder	6.5
9. Businessman	4.0	9. Vet	4.8
10. Clerk	4.0	10. Social worker	3.2

Table 5.4. Pupils' top ten jobs in three schools (in percentages)

School A (low academic standard)		School B (mixed academic standard)		School C (high academic standard)	
S1	N=47	S1	N=152	S1	N=131
1. Construction worker	10.6	1. Artist	15.3	1. Lawyer	13.0
2. Teacher	8.5	2. Teacher	12.1	2. Scientist	9.9
3. Childminder	8.5	3. Doctor	9.7	3. Teacher	9.9
4. Artist	6.4	4. Nurse	8.1	4. Vet	9.2
5. Police	6.4	5. Scientist	7.3	5. Doctor	9.2
6. Chef	6.4	6. Technician	6.0	6. Pilot	8.4
7. Hairdresser	6.4	7. Fireman/ Firewoman	4.8	7. Artist	4.6
8. Lawyer	4.3	8. Pilot	4.8	8. Sportsman/ Sportswoman	4.6
9. Pilot	4.3	9. Police	4.0	9. Police	3.8
10. Air hostess	4.3	10. Sportsman/ Sportswoman	3.2	10. Manager	3.1
S2	N=47	S2	N=125	S2	N=126
1. Construction worker	10.6	1. Teacher	16.8	1. Lawyer	15.9
2. Artist	8.5	2. Artist	11.2	2. Teacher	11.1
3. Clerk	8.5	3. Doctor	8.0	3. Pilot	10.3
4. Childminder	8.5	4. Nurse	7.2	4. Scientist	9.5
5. Teacher	6.4	5. Sportsman/ Sportswoman	6.4	5. Vet	8.7
6. Lawyer	4.3	6. Technician	6.4	6. Doctor	7.1
7. Vet	4.3	7. Scientist	5.6	7. Accountant	5.6
8. Accountant	4.3	8. Lawyer	4.8	8. Artist	4.8
9. Police	4.3	9. Clerk	4.0	9. Sportsman/ Sportswoman	3.2
10. Hairdresser	4.3	10. Construction worker	4.0	10. Designer	3.2

S3	N=48	S3	N=152	S3	N=131
1. Clerk	16.7	1. Teacher	11.2	1. Teacher	15.3
2. Construction worker	14.6	2. Nurse	8.0	2. Scientist	13.0
3. Childminder	8.3	3. Artist	7.2	3. Lawyer	9.2
4. Artist	6.3	4. Sportsman/ Sportswoman	7.2	4. Doctor	7.6
5. Military	6.3	5. Doctor	6.4	5. Accountant	7.6
6. Chef	6.3	6. Architect	6.4	6. Vet	6.9
7. Nurse	4.2	7. Technician	5.6	7. Pilot	6.1
8. Shop assistant	4.2	8. Designer	4.0	8. Artist	5.3
9. Hairdresser	4.2	9. Construction worker	4.0	9. Sportsman/ Sportswoman	4.6
10. Air hostess	2.1	10 Childminder		10. Police	3.8

S4	N=48	S4	N=152	S4	N=130
1. Clerk	14.6	1. Teacher	12.8	1. Scientist	14.1
2. Construction worker	12.5	2. Clerk	8.0	2. Teacher	12.3
3. Artist	10.4	3. Nurse	7.2	3. Lawyer	9.2
4. Chef	8.3	4. Artist	6.4	4. Accountant	7.7
5. Childminder	8.3	5. Architect	6.4	5. Doctor	6.2
6. Nurse	6.3	6. Sportsman/ Sportswoman	5.6	6. Architect	6.2
7. Military	6.3	7. Technician	5.6	7. Pilot	5.4
8. Shop assistant	4.2	8. Doctor	4.8	8. Artist	4.6
9. Air hostess	2.1	9. Construction worker	4.8	9.Businessman/ Businesswoman	3.8
10. Hairdresser	2.1	10. Hairdresser	2.4	10. Manager	3.1

S5	N=3	S5	N=70	S5	N=40
1		1. Teacher	12.9	1. Teacher	20.0
2		2. Doctor	10.0	2. Architect	12.5
3		3. Architect	8.6	3. Accountant	12.5
4		4. Clerk	8.6	4. Scientist	12.5
5		5. Designer	7.1	5. Manager	7.5
6		6. Nurse	7.1	6. Lawyer	5.0
7		7. Artist	5.7	7. Occupational therapist	2.5
8		8. Sportsman/ Sportswoman	5.7	8.Businessman/ Businesswoman	5.0
9		9. Childminder	5.7	9. Artist	2.5
10		10. Lawyer	4.3	10. Author	2.5

Table 5.5. Means, standard deviation (SD) and ranking of the people from whom pupils get help in making careers decisions

People	Mean	SD	Ranking
Mother	1.31	1.67	1
Father	1.17	0.73	2
Working people they have met	1.15	0.69	3
Careers officer/careers teacher	0.99	0.69	4
Guidance teacher	0.84	0.67	5
Friends	0.81	0.71	6
Other teachers	0.70	0.64	7
Relatives	0.63	0.71	8

Mean: 2 = A lot of help 1 = some help 0 = no help

Ranking 1 = most helpful to 8 = least helpful

Table 5.11. Pupils' job level expectations

Level	Number (N)	Percentage (%)
Professional	80	24.1
Managerial and technical	113	34.0
Skilled (non-manual)	68	20.5
Skilled (manual)	65	19.6
Partly skilled	1	0.3
Unskilled	5	0
Total	332	100.0

Table 5.14. Boys' and girls' job level expectations (in percentages)

Level	Boys	Girls
Professional	26.5	21.7
Managerial and technical	25.3	42.8
Skilled (non-manual)	18.1	22.9
Skilled (manual)	29.5	9.6
Partly skilled	0. 6	3
Unskilled	0	0

Table 5.19. The change in pupils' job level aims

	Frequency (f)	Percentage (%)
S1-S2	125	35.2
S2-S3	123	34.7
S3-S4	108	30.5
S4-S5	35	24.8

Table 5.20. The change in pupils' job type aims

	Frequency (f)	Percentage (%)
S1-S2	133	37.5
S2-S3	128	36.2
S3-S4	115	30.7
S4-S5	46	32.6

Table 5.21. The maximum changing values of pupils' job level aims

	Frequency (f)	Percentage (%)
S1-S2	66	18.6
S2-S3	78	22.0
S3-S4	135	38.0
S4-S5	76	21.4

Table 5.22. The maximum changing values of pupils' job type aims

	Frequency (f)	Percentage (%)
S1-S2	58	16.3
S2-S3	104	29.3
S3-S4	123	34.6
S4-S5	70	19.7

Table 5.23. Reasons why pupils change their career aims (N=311)

Reason	%
1. More occupational information	25.4
2. Awareness of personal qualifications	15.4
3. Change in interests	10.3
4. School activities	8.7
5. Family (parents' advice)	4.2
6. Fantasy (T.V./films/novels)	1.6
7. Advice from careers officers	1.0
8. Don't know	20.3